2009 CLEANING AND DEMOLITION PROGRAM

AND

2009 INTERIM MEASURES WORK PLAN ADDENDUM

ASARCO EAST HELENA PLANT

Prepared by:

Hydrometrics, Inc.
3020 Bozeman Avenue
Helena, MT 59601

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All of the buildings and structures listed in Table 1-1 with the exception of the high grade building, truck scale, pump house, direct smelt building, coverall buildings, adobe shed, and concentrate storage and handling building will be subject to pre-cleaning procedures as further described in Section 4.0 of this Work Plan. Pre-cleaning of these structures will not be necessary since they will continue to be utilized following Work Plan implementation. The buildings and structures highlighted in blue on Sheet 4 (Appendix B) are scheduled for cleaning and are further described in Section 5.0. The removal of hazardous waste from

2.2.2 Used Oil and Liquid Management

The contractor shall identify all equipment located within buildings and structures affected by the Work Plan that may contain used oils or other liquids. The contractor shall locate and coordinate the removal of all such oils and liquids prior to commencing any demolition. The contractor may utilize mechanical (metal or plastic) hand pumps or vacuum devices to facilitate oil and other liquid removal. Hand pumps, if used, shall pump the oil or other liquid directly into 55-gallon drums. Drums shall be located adjacent to the work area during oil or liquid transfer to reduce spillage. Once filled, the drum will be sealed and labeled (Section 7.3) with the type of substance. Absorbent shall be available on-site during oil and liquid removal and transfer as a contingency in case of spillage. Used absorbent shall be placed in a drum labeled "Oily Absorbent". The contractor shall promptly clean up oil and grease spills to prevent contamination of storm water and/or run-off. All storage containers shall be relocated by the contractor to the shop storage building. The contractor shall notify Asarco when such relocations take place. Asarco will be responsible for inspection and management of used oils and liquids once they are placed into storage. Asarco will manage used oils and liquids appropriately and, if hazardous, Asarco will manage this waste in accordance with applicable rules and regulations.

2.2.3 Universal Waste (UW) Management

Universal Waste (UW) items shall require special handling and management. UW items that may be encountered during the implementation of the Work Plan include lamps and mercury containing equipment. UW lamps include fluorescent, high intensity discharge, neon, mercury vapor, high-pressure sodium, and metal halide lamps. UW mercury containing equipment includes thermostats that contain metallic mercury in an enclosed ampule. The contractor shall identify all UW lamps within or around the buildings and structures affected by the Work Plan. The contractor shall locate and coordinate the removal of all such lamps prior to commencing any demolition. The contractor shall ensure that all electrical systems have been de-energized before personnel begin removal of the UW lamps. The plastic cover of the light fixture, if present, will be removed and placed on a secure surface, at which time the exposed UW lamps will be removed by hand and placed in an appropriate container for

storage. The contractor may utilize rolling scaffolding, man lifts, or ladders to support workers on single story floors. For ceilings or outside locations that are of greater height, a motorized boom-lift may be utilized to assist in retrieving UW lamps and other lighting components.

The contractor shall identify all UW mercury containing equipment within or around the buildings and structures affected by the Work Plan. The contractor shall locate and coordinate the removal of all such mercury containing equipment prior to commencing any demolition. Each identified piece of mercury containing equipment designated for removal will be isolated and cleared of all obstructions. Disconnection of the isolated items will proceed utilizing all safety and standard removal procedures for the specific item. Procedures will include lockout/tagout of electrical feed to buildings or areas, cutting electrical lines to the unit, and removing isolated items. The removed mercury containing equipment shall be placed in a 5-gallon spill proof plastic container containing several inches of absorbent media. This media will cushion the ampules during facility transportation as well as absorb any free-flowing mercury if ampules were to break or leak. In case of a spill or release, contractor personnel involved in the removal and handling of mercury containing equipment shall utilize a Mercury Spill Response Kit. All storage containers shall be relocated to a designated temporary storage area. Asarco shall be notified when such relocations take place. The contractor should anticipate using the shop storage building for the storage of mercury containing equipment. Asarco will be responsible for inspection and management of UW placed into storage.

2.2.4 Non-PCB and PCB Light Ballasts Management

The contractor shall be responsible for identifying and removal of non-PCB and PCB light ballasts prior to commencing demolition. After removal of fluorescent light tubes, the protective ballast cover shall be removed to access the light ballast. The light ballast inspection may be completed with the fixture in place. The inspection of the light ballast shall include careful review of the ballast label to determine if the ballast contains PCBs. If the ballast is not marked "No PCBs" or the label is removed or unreadable, the ballast shall

be assumed to contain PCBs. If the ballast does not contain PCBs, as determined by this definitive visual inspection, the non-PCB ballast will be left in place for demolition.

During removal of the ballast, if any portion of the light fixture is impacted with PCB oil, the portion of the impacted fixture may be decontaminated by scraping the oil from the ballast cover. Any generated residue or wiping clothes will be considered PCB contaminated and incorporated into the drummed ballast waste stream. All PCB storage containers shall be relocated to a designated temporary storage area. Asarco shall be notified when such relocations take place. The contractor should anticipate using the shop storage building for the storage of mercury containing equipment. Asarco will be responsible for inspection and management of the PCB items placed into storage.

2.2.5 Refrigerant (Freon) Management

Under the 2007 Cleaning and Demolition Work Plan, air conditioning Freon from heating and cooling units within the inactive buildings and structures at the East Helena facility was removed. These heating and cooling units have been marked with a painted yellow stripe. The contractor shall be responsible for identifying and removal of any Freon from remaining building and structures prior to commencing demolition. The Freon containing equipment shall be disconnected utilizing the proper safety and standard removal procedures and evacuated. Air conditioners and chillers shall be disconnected from their power sources. The contractor shall utilize a certified refrigerant recovery subcontractor to facilitate evacuation and recovery of the refrigerant. The contractor shall document on an internal removal log, the quantity in pounds of Freon recovered from the various units. Asarco shall be provided with a copy of the log. Once the unit is cleared, the unit shall will be tagged with an agreed upon colored tag indicating "Freon Removed." The contractor will be responsible for arranging for the recycling of the removed Freon.

2.3 RECYCLABLE MATERIAL PLAN (RMP)

During the demolition phase of the Work Plan, the contractor will likely encounter certain materials or equipment (scrap steel, copper, motors, pumps...) that may be recycled. Asarco

encourages the recycling and recovery of these valuable material assets. The contractor shall develop a Recycling Material Plan (RMP) for review and approval by Asarco. The plan shall include a description of the types of recycle material that the contractor considers valuable. The techniques for segregating recyclable material from waste (including decontamination procedures), manner for transporting to the recycling facility, tracking of recyclable material, and inspection procedures shall be included in the RMP. The contractor shall establish recyclable material staging and loading areas. These areas shall be easily accessible to expedite loading and transport activities. Surface cover in these areas shall be durable enough to withstand the storage and movement of heavy scrap material without breaking apart and creating difficulties when loading the material or impacting the areas. The contractor shall provide records to Asarco that indicate the manner in which recyclable material is managed, handled, or treated for recovery or recycling that demonstrates it's value. The contractor shall submit 1) acceptance criteria required by the receiving facility (expressed as a minimum threshold of recoverable metals and maximum allowable toxic metals), 2) a demonstration that the receiving facility is in compliance with all applicable environmental requirements, 3) a copy of the contractual agreement between Asarco, its broker and the receiving facility, and 4) the name of the state or provincial regulatory contact and facility contact.

2.4 DUST CONTROL PLAN (DCP)

The contractor shall develop a Dust Control Plan (DCP) for review and approval by Asarco. The general requirements of this plan shall be to provide adequate resources to control dust and to detail the means and methods that shall be utilized to implement dust control measures during Work Plan activities. The contractor's dust control measures shall be designed to control the emission of visible fugitive nuisance dust. These controls shall be accomplished through the use of administrative, engineering, and physical controls that shall include, but not be limited to:

- Moistening surfaces with water,
- Applying dust suppressants or encapsulates, where applicable,

- Minimizing soil, road, and surface disturbances,
- Minimizing dust exposure periods and wind erosion before dust-abatement measures are applied,
- Utilizing a vacuum sweeper to remove road dust spillage,
- Curtailing of work activities during high wind conditions (over 15 MPH average hourly rate),
- Controlling vehicle and equipment speeds (10 MPH maximum),
- Restricting traffic to designated roads and corridors, and
- Selecting appropriate equipment.

The contractor shall utilize an overall dust control application program that shall include, but not limited to:

- Providing dust suppression (water) before, during, and after demolition of a structure,
- Moistening the targeted drop area prior to the demolition of the structure,
- Installing protective barriers to minimize debris shrapnel during demolition of structures,
- Providing dust control during material sizing and loading operations,
- Controlling material drop heights during loading, unloading and material transfer operations,
- Minimizing and controlling material handling operations,
- Controlling on-site vehicular traffic and performing haul road maintenance, and
- Applying other approved methods for control of dust during specific procedures.

The contractor shall consider the mitigation of airborne dust generation a priority. Throughout the project, the contractor shall execute all necessary steps to effectively control dust in the working area during Work Plan activities. Asarco reserves the right to stop all work if Asarco personnel or the Asarco engineering consultant believe the contractor is not meeting the obligations of their DCP. The contractor shall remove at ground level and at all accessible areas all gross debris accumulation that could be a source of airborne dust. Prior

to demolition, the contractor shall institute a program of pre-wetting and moistening building interiors and horizontal surfaces where dust has accumulated. This pre-wetting of the structure interiors will minimize remaining dust from becoming airborne during the demolition process. Dust that may fall to the ground shall be gathered, containerized, and properly managed.

The contractor shall utilize water trucks, misting systems, and all other appropriate equipment (i.e. manlifts) to keep debris moist during the demolition and loading process. The DCP shall outline the dust control measures during stack demolition, including the prohibition of stack demolition if wind conditions exceed 5 mph. All transport vehicles shall be limited to a maximum 10 miles per hour while both on-site and during transport. Limiting speeds shall prevent dust from become airborne during transport and shall reduce the kick-up of dust from rolling tire action.

The contractor shall ensure that transport of waste on-site occurs on prescribed paths, which will be determined during the course of demolition. The changing nature of the site as demolition of structures progress may dictate the modifications of haul routes. Once defined, these haul routes shall be enforced to create dedicated routes that can be maintained to mitigate dust and debris migration and prevent any potential spread of contamination. The contractor shall be responsible for maintenance of haul routes through routine daily inspection to ensure that debris is not being released. The Contractor shall promptly address all deviations encountered during daily inspections.

The contractor shall lightly dampen haul routes with a water truck on a frequency to prevent the generation of dust. The facility's air quality permit requires the use of dust suppression methods, including the use of water, to meet this obligation. The use of water as a dust suppression shall be managed to minimize infiltration. The temperatures and relative humidity experienced during the construction season will promote evaporation of the water used for dust suppression rather than infiltration. Street sweepers or a vacuum truck shall be used on plant site and waste transport haul roads. Water dust suppression can augment the

constant use of street sweepers or vacuum trucks. The contractor shall utilize the services of a street sweeper to clean the haul routes of accumulated debris and dust. This debris and dust sweepings will be hauled to the CAMU Phase 2 Cell.

Haul roads within the plant site and haul roads used for waste transport will need to be kept clean at all times. A street sweeper designated to cleaning roads and surfaces within the plant site will clean all loose dust in order to minimize the chances for the off-site migration of dust and debris. This street sweeper will not be used off site of the plant. A second street sweeper designated to keeping CAMU Phase 2 Cell haul roads clean will be run constantly when waste is being hauled. Haul roads at the CAMU Phase 2 Cell have been paved so that waste and debris can easily be cleaned. In addition, the contractor shall place and maintain large gravel on a section of the haul route at the plant exit and CAMU exit to remove loose dust and debris from haul truck tires. Once hauling of waste is complete, the contractor will place this gravel material in the CAMU Phase 2 Cell. The DCP shall also address a plan for the application of a dust suppressant or binder on waste in the CAMU Phase 2 Cell. The application of a dust suppressant or binder may be necessary if fugitive dust emissions from the CAMU Phase 2 Cell occur, or the CAMU Phase 2 Cell is left open for an extended period of time due to construction or demolition delays.

The DCP shall indicate that the existing Asarco provided fill station, adjacent to Upper Lake, be utilized as the main source of non-potable water for dust suppression operations. The fill station water source used for dust suppression is Upper Lake.

The contractor project staff (i.e., project superintendent, foremen, H&SP) shall inspect work areas daily to assess the need for implementation (or additional implementation) of dust control measures. The contractor shall include inspection procedures and recordation within the DCP.

2.5 STACK DEMOLITION PLAN (SDP)

The contractor shall develop a Stack Demolition Plan (SDP) for review and approval by Asarco. Asarco will submit an approved copy of the SDP to the MDEQ and EPA for their records prior to commencement of cleaning and demolition activities. The SDP shall describe the means and methods for demolition of the blast furnace, sinter plant, acid plant, and concentrate storage and handling building stacks. The SDP shall include stack demolition procedures and protocol, worker and public health and safety measures, and actions that shall be taken to control the emission of dust, as further detailed in the DCP. The contractor shall be responsible for coordination of stack demolition activities with other Asarco contractors, the Asarco engineering consultant, and the Federal Aviation Administration (FAA).

The SDP shall ensure that all demolition debris is contained within the Asarco East Helena facility. No stack debris, regardless of size, shall cross the fence line or the boundary into Upper Lake or Lower Lake. The SDP shall contain protocol to protect existing structures, existing wells, and the existing interim temporary cover system.

The SDP shall contain provisions for conducting a pre-blast survey by an independent firm hired by the contractor to verify that the surrounding structures are not affected by the demolition (blast) activities. Seismographs shall be placed at various locations surrounding the blast site to verify that blast vibration does not exceed prescribed values. The estimated peak particle velocity should be less than 0.25 inches/ second at a 500-foot radius from the stacks. The initiation system shall be a non-electric system to provide a higher factor of safety and eliminate premature detonation by lightning or radio interference.

The contractor shall establish a secure area around the site. All site security shall be coordinated between Asarco, the contractor, and the local authorities. The SDP and Community Relations Plan (Section 2.6) shall identify all lines of communication between local authorities and the contractor prior to stack demolition.

2.6 COMMUNITY RELATIONS PLAN (CRP)

The contractor shall develop a Community Relations Plan (CRP) for review and approval by Asarco. Asarco will submit an approved copy of the CRP to the MDEQ and EPA for their records prior to commencement of cleaning and demolition activities. At a minimum, the CRP shall specify the manner for notifying, communicating, and securing the site with Asarco, MDEQ, EPA, local law enforcement authorities, the city of East Helena, Lewis and Clark County, media, and the local community throughout demolition activities.

2.7 NESHAP PERMIT

The contractor shall obtain the applicable National Emissions Standard for Hazardous Air Pollutants (NESHAP) Permit. This permit is required for both asbestos abatement activities and demolition activities. The contractor shall communicate directly with the MDEQ to obtain the permit and shall present the executed permit to Asarco prior to mobilization. Asarco recommends that the contractor promptly work with the MDEQ to ensure that the Asbestos NESHAP notification is complete and an asbestos project permit is acquired in a timely manner so as not to delay the demolition and clean-up schedule.

2.8 CONSTRUCTION SCHEDULE

The contractor shall prepare a detailed construction schedule that includes, at a minimum, durations and milestones for Work Plan activities. The schedule shall provide sufficient detail to define the path of the project and include time for delays from inclement weather. Throughout the project, the schedule shall be regularly updated to reflect current conditions. The contractor will provide all schedules to Asarco, the MDEQ, and EPA.

2.9 STORM WATER CONTAINMENT, RUN-OFF PATTERNS, AND WATER MANAGEMENT

The contractor should rely upon the Asarco East Helena facility's existing Storm Water Prevention Plan (SWPPP) for this scope of work. This SWPPP describes storm water prevention procedures to be utilized during the Work Plan. In general, facility storm water runoff is routed to the internal plant water handling system. Storm water and run-off will be

directed to the High Density Sludge (HDS) water treatment facility (WTF) to be operated by Asarco personnel. The contractor will be responsible for the separation of solids and liquids from all water used by the contractor during the implementation of this Work Plan. The contractor will need to remove solids from water reporting to the WTF, dry solids, and place dry solids in the CAMU Phase 2 Cell.

In areas where cleaning and/or demolition could potentially create runoff, the contractor shall protect the drains as necessary to prevent contaminants from entering the system. This protection shall consist of a combination of sand bags, hay bales, and filter fabric strategically placed to remove the solids while allowing the storm water and/or run-off to continue to the existing storm water containment and treatment system. The contractor shall ensure storm water and run-off is free of grease and oils by utilizing methods to prevent and promptly clean any oil and grease spills. The contractor will be responsible for ensuring that the existing storm water containment and treatment system is not impaired and in proper working order upon completion of Work Plan activities.

The contractor shall utilize Best Management Practices (BMPs) throughout the Work Plan implementation. From the existing SWPPP, applicable information, such as management practices for the hazardous material storage areas, shall be incorporated into the contractor's Best Management Practices. Other material handling practices related specifically to the decontamination and demolition activities shall be addressed. Management practices for cross-contamination control shall be addressed, such as avoiding spills from construction vehicles during hauling, loading, servicing, and fueling and controlling contaminated soil erosion. Any changes to the storm drainage system due to demolition will be addressed as the structures are demolished and the site conditions change.

Standard erosion control measures shall be utilized, including controlling dust, providing straw bales around storm drain inlets, placing sand-bags at critical perimeter locations, and avoiding off-site tracking of debris from vehicles. Provisions to avoid ponding and maintain excavations free of storm water runoff shall be addressed. Typically, this will involve filling

these locations prior to storms. Measures for erosion control shall be added as the project progresses.

The contractor shall perform inspection of the erosion control measures prior to, during, and after storms to evaluate the adequacy of these measures and to manage corrections as necessary. Documentation of the inspection and correction activities shall be maintained, as required. Generally, the contractor's project manager or engineer shall perform the inspection and documentation. Copies of the documentation shall be forwarded to Asarco for review and record retention.

Existing collection trenches and sumps shall be used to collect surface water during Work Plan implementation. The locations of these trenches and sumps will be confirmed and identified by the contractor, utilizing existing project utility plans and plant engineering drawings, during the pre-mobilization activities as well as throughout the completion of Work Plan. During collection of surface water, water will be directed to Asarco's WTF for treatment. Asarco shall manage all collected surface water run-off in the WTF. Asarco shall be responsible for any required water treatment, waste management, and disposal permits associated with the WTF. The contractor shall be responsible for maintaining and cleaning existing storm water collection trenches and sumps.

The conveyance systems used to collect project decontamination water will include, but not limited to those features generally located in the vicinity of Asarco's wastewater treatment and the on-site car wash facilities. The East Helena Plant WTF treats facility water and discharges the treated water under Asarco's MPDES permit. The sludges that collect in sumps, defined as wastewater treatment units (40 CFR 260.10), are exempt from RCRA permitting. When generated by removal from the sumps, the sludges will be managed appropriately and, if hazardous, will be managed in accordance with applicable rules and regulations.

Asarco's current MPDES permit, March 2001 MPDES permit renewal application, and April 2007 update to its March 2001 MPDES permit renewal application (MDEQ action pending) list Upper Lake and City of East Helena water as operations contributing flow to Asarco's WTF effluent, both of which may be used for decontamination of project equipment. The MPDES permit allowed for the treatment of decontamination equipment wash water during plant operations. The MPDES permit provides for this same treatment during the cleaning and demolition activities.

2.10 SITE SECURITY

The contractor shall establish a site security plan for review and approval by Asarco. The contractor shall be responsible for all facets of site security during implementation of the Work Plan. The facility is currently surrounded by security fencing or structures, which will prevent unauthorized personnel access to the site. The contractor shall establish work hours in consultation with Asarco. The contractor shall follow sign-in procedures and check in at the main facility gate or another gate/entrance specified. The contractor shall control access to work areas during operating hours through the monitoring of a single ingress/egress location with mandatory sign-in procedures for all contractor personnel. During off-hours, sensitive work areas (open ditches, channels, and holes) shall be cordoned off with temporary barricades, delineators and caution tape. The contractor shall coordinate with community leaders, local authorities, law enforcement officials, and private owners to restrict public access to the facility during all phases of the Work Plan. The contractor may be required to close public right-of ways, county roads, and rail corridors; establish exclusion zones; and control public and media viewing.

2.11 ADMINISTRATIVE, STAGING, AND DECONTAMINATION FACILITIES

The contractor shall establish and utilize temporary facilities and construction control procedures throughout the Work Plan. Asarco will make available, and the contractor will maintain, temporary office space to coordinate field construction activities. The contractor shall provide adequate sanitary facilities, fences, barricades and scaffolding. Storage for tools, light equipment and appropriate signs shall be established, as needed, for this project.

Temporary services shall be coordinated with Asarco for Work Plan activities and site traffic. Safety shall be managed, including the monitoring of vehicular and pedestrian traffic and public safety, as needed.

The contractor shall establish work zones during pre-mobilization planning. In general, this planning shall include:

- Lead and decontamination exclusion areas,
- ACM removal areas,
- Equipment staging areas,
- Personnel decontamination areas,
- Storage areas,
- Demolition and material salvage areas,
- Loading areas and staging of off-site waste, and
- Field office and support areas.

2.12 GENERAL CONSTRUCTION PERMITTING

The following list identifies the applicable permits and/or notification that may be obtained or the agencies that may need to be notified by the contractor prior to the initiation of any fieldwork.

- Montana Department of Environmental Quality (MDEQ).
- Environmental Protection Agency (EPA).
- Division of Occupational Safety and Health (OSHA) Department of Industrial Relations - Notification of Asbestos Abatement.
- Division of Occupational Safety and Health (OSHA) Department of Industrial Relations - Notification of Demolition Activity S-691.
- Montana Rail Link.
- Lewis and Clark County Sheriff.
- City of East Helena Police Department.
- Montana Highway Patrol.

2.13 PRE-CONSTRUCTION MEETING

Following the completion of the pre-construction contractor tasks outlined above, a pre-construction meeting shall be held at the facility or other location designated by Asarco. The purpose of the meeting will be to discuss the scope of work and the roles of the parties involved. Details regarding the date that fieldwork will be initiated, site access requirements, hours of operation, deliverables required by Asarco, and locations of construction equipment, staging and cleaning areas should be discussed. Participants in the meeting shall include the Asarco project team, Asarco's engineering consultant project team, the contractor's project team, the MDEQ, and EPA.

2.14 MOBILIZATION

Following the pre-construction meeting, work areas shall be secured and a central field office shall be established. Equipment and materials necessary to complete the project shall be moved to the facility and staged at predetermined locations within the facility. In addition to the field office, the following work areas shall be established:

- Establishment of on-site electric and water service (as needed),
- Personnel decontamination areas,
- Temporary conveyance systems,
- Equipment lay down areas, and
- Demolition salvage staging and loading areas.

The contractor shall establish personnel decontamination areas for each exclusion zone and work activities that may expose workers to unique safety hazards and/or hazardous levels of chemicals and waste materials. These requirements shall be used to determine appropriate personnel protective equipment (PPE) that will be used in each of the separate plant areas during each phase of work. Required PPE, decontamination procedures, and personnel decontamination equipment shall be identified in the contractors HSP and HMAP.

3.0 HISTORIC SURVEY AND RECORDATION

Asarco shall contract an engineering consultant to conduct historic recordation of the demolition structures and buildings identified in the Work Plan. The proposed demolition focuses twelve structures with associated features anticipated to be impacted by the project. The cleaning of specific structures or building features (such as baghouse bags or pump house equipment removal) will proceed following consultation with the Montana State Historic Preservation Officer and notice to proceed is received by MDEQ and EPA. In addition, no demolition activities will commence on structures listed in the section until the photographic documentation is complete and notice to proceed is received by MDEQ and EPA. In conjunction with EPA, the Montana State Historic Preservation Office (SHPO), and MDEQ, Asarco's engineering consultant shall define the requirements for historic recordation of the twelve structures and associated features. These obligations are:

- Provide a plan map of the facility indicating photograph numbers, photograph locations, and cardinal directions of each photograph taken.
- Provide photographs and a photographic log of each structure.
- Provide drawings and plans for each structure.
- Provide video documentation of the demolition of the three stacks.
- Provide a context narrative,.
- Provide Cultural Resources Information System (CRIS) Forms.
- Provide archival quality 5 by 7 inch prints and photograph log of each structure.

5.0 CLEANING

The contractor is responsible for conducting all facets of the cleaning process. In most cases, the building and structures identified in the Work Plan have been utilized to store process material. The intent of the cleaning task prescribed in the Work Plan is twofold. First, the cleaning of building and structures that will not be demolished shall eliminate the presence of process material. The removal of hazardous waste from these building and structures will be deemed complete when no process materials are visible, as determined by MDEQ representatives. Second, the cleaning of buildings and structures scheduled for demolition shall reduce the potential for fugitive emissions during demolition activities. The contractor shall implement all necessary precautions, which shall be addressed in the contractor's HSP and DCP when working with and handling process material. The buildings and structures identified for cleaning are delineated on Sheet 4 and Sheet 5 in Appendix B. The cleaning activities may commence prior to conducting the historic survey and recordation phase of the Work Plan providing that these activities do not compromise the building or structure integrity. However, the cleaning of specific structures and building features (such as baghouse bags and pump house equipment removal) will proceed following consultation with the Montana State Historic Preservation Officer and notice to proceed is received by MDEQ and EPA.

5.1 CLEANING OF BUILDINGS AND STRUCTURES NOT SCHEDULED FOR DEMOLITION

The cleaning of buildings and structures not scheduled for demolition are shown on Sheet 4 in Appendix B. The cleaning of buildings and structures that will not be demolished shall consist of:

- Prepare identified work areas,
- Conduct initial, dry removal of bulk solids,
- Remove bulk materials,
- Conduct vacuum cleaning,

- Place vacuum solids in sealed containers,
- Haul all containers to CAMU Phase 2 Cell,
- Wash down identified work area,
- Manage wash down water within identified work area, and
- Haul dried solids to CAMU Phase 2 Cell.

Work area preparation will consist of delineating a work area that can be both easily contained and is considered a cohesive area unit. Once the work area has been defined, the contractor shall begin the removal of initial, bulk solids. The goal of this task will be to remove the gross, dry accumulation of process material at all areas within the identified structure or building. In certain structures and buildings, the contractor should anticipate using chipping, grinding, and jack hammering equipment to remove hardened, adhered, or fused materials. The bulk material collected using these techniques shall be placed into haul trucks, weighed, sampled, and transported to the CAMU Phase 2 Cell. An industrial vacuum system equipped with HEPA filtration shall augment the dry removal of process material. Material collected using the vacuuming procedures and removed baghouse bags shall be loaded via airtight chute into appropriate containers (i.e., double 6-mil mega bags, etc.), weighed, and hauled to the CAMU Phase 2 Cell. The contractor will be responsible for coordination of these activates with the Asarco engineering consultant.

The buildings and structures not scheduled for demolition shall require supplemental cleaning using low-volume, high-pressure washers. Upon completion of the gross process material removal and vacuuming of floors, walls, ceilings, and tank interiors, the contractor shall pressure wash all interior surfaces using low-volume, high-pressure washers. The contractor shall be responsible for removing all process material and cleaning these structures to the satisfaction of Asarco and MDEQ to ensure that no process material is visible. The contractor shall control the use and contain the presence of wash down water to the building, structure, or tank interior. The contractor shall augment the evaporation or absorption of wash down water and enhance the separation of solids to minimize their impact to Asarco's WTF. Any tank cleaning water or excess water not evaporated or absorbed shall be collected

by the contractor (i.e. by vacuum) and routed to Asarco's WTF. Excess water shall not be allowed to stand for lengthy periods of time and must be completely collected by the contractor by the end of each workday. Water will not be allowed to collect in areas where there are obvious cracks in concrete or other pathways to soil. The specific cleaning procedures for building, structures, and tanks that are not scheduled for demolition is discussed below.

5.1.1 Hydrogen Peroxide Tanks

Two aluminum tanks, each having the capacity of 13,000 gallons, were used to store 50 percent hydrogen peroxide. The last of the hydrogen peroxide was drained from these tanks in July 2007. Bulk solids removal within these storage tanks will not be necessary. The contractor shall wash the interior of these tanks using a low-volume, high-pressure washer.

5.1.2 High-Grade Building

The high-grade building stored and processed high-grade material (containing appreciable amounts of precious metals) within a secured and gated facility. The high-grade material generally arrived in sealed containers or drums. The contractor shall anticipate minimal bulk solids removal from this building. The contractor shall vacuum clean the interior and surrounding area of the high-grade building to remove all visible process material. Once all bulk solids are removed and the entire interior of the building is vacuum cleaned, the contractor shall wash the interior (ceiling, walls, floor) of the building using a low-volume, high-pressure washer.

5.1.3 Truck Scale

The truck scale continues to be used to weigh incoming material that enters the facility and outgoing material that leaves the facility. The contractor shall anticipate nominal bulk solids removal from under the scale. The contractor shall vacuum clean the areas under and surrounding the truck scale to remove all visible process material. Once all bulk solids are removed and the entire area is vacuum cleaned, the contractor shall wash the surrounding

area using a low-volume, high-pressure washer. To maximize cleaning efforts, the contractor shall schedule the cleaning of the truck scale near the end of the Work Plan activities.

5.1.4 Locomotive Crane Shed

The locomotive crane shed garaged the diesel electric crane and was used sparingly to store containerized process material. Bulk process material was not stored within the crane shed. Lime rock was placed around the exterior of this building to act as a run-on diversion berm. This building may have a partial dirt floor. The contractor shall remove all lime rock around the exterior of the building. The contractor shall remove the lime rock fill from the maintenance pits. The contractor shall remove all debris inside and surrounding the building and vacuum clean the interior of the building's floor, walls, and ceiling to remove all visible material. Once all bulk solids are removed and the entire area is vacuum cleaned, the contractor shall wash the building interior using a low-volume, high-pressure washer. The RPE liner material located inside the building shall be sized to be no greater than 6ft by 6ft sheets before being placed in the CAMU Phase 2 Cell. The contractor will place sized RPE material in the CAMU Phase 2 Cell at the direction of Asarco's engineering consultant.

5.1.5 Cement and Dust Silos and Coke Hopper

The two enclosed silos were used to store cement and baghouse dust prior to these materials being placed into mixing agglomerators and the coke hopper was used to feed the previously demolished coke transfer belt. The silos and coke hopper have been previously cleaned so the contractor shall anticipate minimal bulk solids removal from these structures and the surrounding area. Small bin ventilation baghouses are located on the top of each silo. The contractor shall remove all bags from the baghouses and vacuum clean the baghouse interiors. The contractor shall wash the interior of the baghouses, silos, and coke hopper using a low-volume, high-pressure washer.

5.1.6 Soda Ash and Lime Silo

The enclosed silos stored soda ash and lime, which were once used as reagents in the Asarco's WTF. A small bin ventilation baghouses are located on the top of the silos. The

contractor shall remove all bags from the baghouse and vacuum clean the baghouse and silo interior as well as the surrounding area. The contractor shall wash the interior of the baghouses and silos using a low-volume, high-pressure washer.

5.1.7 Pump House

The pump house contains pumps that previously provided water for 1) fire protection and process usage at the facility and 2) the closed circuit blast furnace cooling system. The building also contains an electrical storage room and an empty diesel tank. The contractor will remove all debris in and around the building, vacuum clean the interior of the building's floor, walls, and ceiling, and relocate the diesel tank to an area specified by Asarco for re-use. The contractor shall wash the interior of the pump house using a low-volume, high-pressure washer. The contractor shall be careful not to damage the water transfer line entering and exiting the building.

5.1.8 Storm Water Sump

The active sump collects storm water and routes it through an underground line to Thornock tank. The contractor will remove the lid on the sump and vacuum clean the interior of the sump to remove all sludge and clean the area surrounding the sump. Removed sludge is not eligible for the CAMU. The contractor shall dry the sludge removed from the storm water sump. Asarco will manage the sludge removed from the sump appropriately, and, if hazardous, will be managed in accordance with applicable rules and regulations. The contractor will replace the lid on the sump, as it is still in use. The contractor shall be careful not to damage the water transfer line entering and exiting the sump.

5.1.9 Direct Smelt Building

The Direct Smelt Building (DSB) stored material that was designated for processing within the now demolished blast furnace. Recently, the DSB accumulated ACM prior to placement in the CAMU Phase 2 Cell. The contractor shall anticipate significant bulk solids and adhered material removal from this building, particularly behind the bins walls and along support beams. The contractor shall remove bulk solids and vacuum clean the interior and

surrounding exterior of the DSB. This task shall include vacuuming process material from the interior of bins, from behind bin walls, and from the area surrounding the building. Once all bulk solids are removed and the entire interior of the building has been vacuum cleaned, the contractor shall wash the interior's ceiling, walls, beams, and floor using a low-volume, high-pressure washer.

5.1.10 Coverall Buildings

The two Coverall buildings were used to store process material prior to the material being directed to the smelting operation. Recently, the Coverall buildings accumulated hazardous wastes prior to the waste being placed in the CAMU Phase 2 Cell. In 2007, the interior floors of the buildings were washed down. The contractor shall dismantle the cement barriers (lego blocks) walls that line the inside of the coverall buildings. The individual lego blocks shall be cleaned using a low-volume, high-pressure washer. The cleaned cement barriers may be stored on the concrete pad west of the coverall buildings. Sheet 4 in Appendix B identifies the outside location where clean cement barriers may be placed. Upon removal and cleaning of all cement barriers from these buildings, the contractor shall vacuum process material from the interior and from the area surrounding the building. The contractor shall wash the building interior floors, walls, ceiling, and support structures using a low-volume, high-pressure washer.

5.1.11 Adobe Shed

The adobe shed was used to manufacture and store adobe block for use at the blast furnace area. The contractor shall anticipate minimal bulk solids removal from this building. The contractor shall remove bulk solids and vacuum clean the interior and area surrounding the adobe shed. Once all bulk solids are removed and the entire interior of the building is vacuum cleaned, the contractor shall wash the interior (ceiling, walls, floor) of the building using a low-volume, high-pressure washer.

5.1.12 Utility Support Towers

Two metal support towers are located in close proximity to Asarco's WTF. The towers support active electrical conduits and water carrying pipes. The contractor shall anticipate minimal bulk solids removal from the towers and the surrounding area. Lift trucks or man hoists will be necessary to access the upper portions of the support towers. Some process material has adhered to the tower metal supports, which may require jack hammering or other physical removal methods. Once all bulk solids are removed and the two towers and surrounding areas have been vacuum cleaned, the contractor shall wash the towers using a low-volume, high-pressure washer.

5.1.13 Concentrate Storage and Handling Building (CSHB)

The concentrate storage and handling building (CSHB) was placed into operations in 1990 to house the majority of concentrate unloading and handling operations. Concrete bins stored materials such as concentrates, by-products, coke breeze, limerock, and silica. A bridge crane accessed material from railcars and from within the bins for placement into material feeders. Feed hoppers proportioned the material onto conveyor belts for delivery to the now demolished sinter plant. The contractor shall anticipate significant bulk solids removal from this building, particularly behind the bins walls, inside the feed hoppers, within the feed area, and along support beams. Some process material may have adhered to the building or bin surfaces, which may require jack hammering or other physical removal methods. The contractor shall expect to use large mechanical equipment and considerable human resources to remove the bulk solids. The contractor shall also remove all visible process materials surrounding the building.

The contractor shall vacuum clean the interior and surrounding areas of the CSHB. This task involves removing all process material from but not limited to the interior of bins, behind bin walls, hoppers, feeders, cranes, railways, and belt lines. The large bins in the Concentrate Storage and Handling Building may be difficult to access. The contractor may consult with Asarco personnel to determine alternative access to bin interiors (i.e., creating access ports in bin walls). Once all bulk solids are removed and the entire interior of the building has been

vacuum cleaned, the contractor shall wash the interior of the building using a low-volume, high-pressure washer. Excess wash water shall not be allowed to stand for lengthy periods of time in areas of the CSHB and must be completely collected by the contractor by the end of each workday.

5.2 CLEANING OF BUILDINGS AND STRUCTURES PRIOR TO DEMOLITION

The cleaning of buildings and structures prior to demolition are shown on Sheet 5 in Appendix B. The cleaning of building and structures that will be demolished shall consist of:

- Prepare identified work areas,
- Conduct initial, dry removal of bulk solids,
- Place removed bulk solids in sealed containers, and
- Haul sealed containers to CAMU Phase 2 Cell.

When compared to the cleaning of buildings and structures that are not scheduled for demolition, those buildings and structures that are scheduled for demolition will require less precise cleaning. The reduced level of cleaning reflects the fact that the building and structures will be demolished and will no longer exist. As before, work area preparation will consist of delineating a work area that can be both easily contained and is considered a cohesive area unit. Once the work area has been defined, the contractor shall begin the removal of bulk solids. The goal of this task will be to remove the gross, dry accumulation of contamination (baghouse bags, process material, etc.) at all accessible areas. Personnel utilizing hand tools shall perform these tasks. A trailer mounted industrial vacuum system equipped with HEPA filtration shall augment the dry removal of process material. Material collected using these procedures shall be loaded via airtight chute into appropriate containers (i.e., double 6-mil mega bags, etc.), weighed, and hauled to the CAMU Phase 2 Cell. The removal of the baghouse bags and dry accumulation of process material will ensure more effective dust control during demolition. The specific cleaning procedures for building, structures, and tanks that are scheduled for demolition is discussed below.

5.2.1 Sample Mill and Dust Loadout Baghouses

The sample mill building served to prepare and split incoming ore concentrates, interplant by-products, crude ores, and high-grade ores prior to chemical analysis and moisture content determination. The individual sample mill process equipment included scales, bucking tables, rod mills, and drying ovens. The bucking rooms were ventilated by the sample mill baghouse. The dust loadout facility was used sparingly to ventilate blast furnace baghouse dust transfer. The contractor shall remove all the bags from the sample mill and dust loadout baghouses and vacuum clean the baghouse interiors prior to demolition.

5.2.2 Crushing Mill Baghouses

The crushing mill was used for size reduction and sampling of crude ores and plant by-products. The individual crushing mill process equipment includes a track hopper, conveyor belts, crushers, feeders, screens, and samplers. The crushing mill utilized three baghouses (two of which are also known as the No. 7 and No.8 sinter plant baghouses) to provide source ventilation. The contractor shall remove all the bags from the baghouses and vacuum clean the baghouse interiors prior to demolition.

5.2.3 Sinter Stockpile Building Baghouse

The sinter stockpile building temporarily stored sinter prior to it being processing in the now demolished blast furnace. The sinter stockpile baghouse is located on top of the sinter stockpile building. The contractor will remove all the bags from the baghouse and vacuum clean the baghouse interior prior to demolition.

5.2.4 Concentrate Storage and Handling Building (CSHB) Baghouses, Ventilation Ductwork, and Stack Base

Two large baghouses provided ventilation to the CSHB. A smaller baghouse provided ventilation to the CSHB feeder area. The sinter plant weak gas handling baghouse and new crushing mill baghouse are attached to the east side of the CSHB. The contractor shall remove all the bags from the baghouses and vacuum clean the baghouse interiors, all associated ventilation piping, and the associated stack base prior to demolition. In addition, the contractor shall relocate and resupport overhead power lines and an above ground gas line

attached to these structures prior to cleaning. Relocation of the power lines will require a variance from the FAA, which the contractor will be responsible for obtaining, as this line supplies power to the Blast Furnace Stack beacon lights.

5.2.5 Hopto Pad, Storage Bins, and Conveyor Gallery

The hopto pad, storage bins, and conveyor unloaded and transferred certain ores and by-products. The ores and by-products were unloaded by a large back-hoe (hopto), placed into a storage bins or receiving hopper, and transferred via a conveyor belt system to the former ore receiving and proportioning building, now known as the direct smelt building. The contractor shall remove any large debris and vacuum clean the hopto pad, storage bins, conveyor gallery, and associated tunnel prior to demolition.

5.2.6 Acid Dust Facility

The facility stored acid dust within an enclosed silo. The acid dust was agglomerated prior to being conveyed to the CSHB. A small bin ventilation baghouse is located on the top of the silo. The contractor will remove all the bags from the baghouse and vacuum clean the baghouse interior. The contractor will vacuum clean the interior of the silo and acid dust building prior to demolition. In addition, the contractor shall relocate and resupport overhead power lines attached to the structure prior to cleaning. Relocation of the power lines will require a variance from the FAA, which the contractor will be responsible for obtaining, as this line supplies power to the Blast Furnace Stack beacon lights.

5.2.7 Groundwater Sump

The sump previously collected groundwater in the vicinity of the direct smelt building. Groundwater was pumped from the sump to the internal water handling system to prevent flooding of nearby buildings. After re-construction of the direct smelt building, the necessity of the sump was eliminated. The sump has not been used in the last 10 to 15 years. The contractor shall vacuum clean the base of the four-foot diameter, 14 ½-foot deep groundwater sump that exists near the highline railroad prior to abandonment.

7.0 WASTE AND RECYCLABLE MATERIAL MANAGEMENT

The contractor shall utilize the components of this Work Plan section for coordination and off-site management of the waste streams and recyclable materials that are expected to be generated during the Work Plan. This Work Plan section has been developed to provide guidance, direction, and procedures for managing waste steams (both solid and liquid) and recyclable materials generated as a result of pre-cleaning, cleaning, and demolition activities.

7.1 MATERIAL SCENARIOS AND MANAGEMENT OPTIONS

During the Work Plan implementation, waste streams and recyclable material are expected to be generated. The potential categories and required management options are:

- Friable and non-friable ACM – CAMU Phase 2 Cell,
- Used oil and liquids – Off-site management,
- Universal waste (UW) – Off-site management,
- PCB light ballast – Off-site management,
- Refrigerant – Off-site management,
- Recyclable material - Off-site management,
- Cleaning and demolition material – CAMU Phase 2 Cell, and
- Storm water sump sludge – Off–site management.

Asarco does not anticipate encountering any non-CAMU eligible wastes other than those outlined above. Non-CAMU eligible waste will be managed in accordance with applicable rules and regulations. The contractor shall be responsible for the management of friable and non-friable ACM, refrigerant, recyclable material, and cleaning and demolition material. Asarco will manage the used oil and liquids, universal waste, and PCB light ballast that have been placed in the Shop storage building.

7.2 MANAGEMENT OF NON-CAMU MATERIAL STREAMS

The contractor shall containerize all non-CAMU Phase 2 Cell destine material that may encountered during the Work Plan implementation. Recyclable materials will be containerized to meet the specifications of the recycling facility. For all other non-CAMU Phase 2 Cell destine materials, the contactor shall use containers made of or lined with components, which will not react with, and are otherwise compatible with, the material to be transferred or stored, so that the ability of the container to contain the waste is not impaired. If a container holding non-CAMU Phase 2 Cell material becomes compromised (e.g. severe rusting, apparent structural defects), or if it begins to leak, the contractor shall immediately transfer the material to a secure container. The contractor shall inspect containers and areas used to accumulate containerized materials at least weekly. Asarco will be responsible for inspecting containers placed into the shop storage building.

Incompatible wastes shall not be placed within the same container. The contractor shall handle and manage incompatible waste in such a manner that prevents violent reactions, generation of uncontrolled fumes, mists, gases and dusts, production of flammable fumes or gases and damage to the integrity of the material container.

Hazardous materials shall not be placed in an unwashed container that previously held an incompatible material. A container holding hazardous materials that is incompatible with any material transferred or stored nearby in other containers, piles, open tanks, or surface impoundments shall be separated from the other material.

The contractor shall store all hazardous material in containers suitable for transport in accordance with 49 CFR Parts 170 through 179 or the requirements of the transporter, whichever is more stringent. No material shall be transferred or stored in a manner, which may rupture the container or cause it to leak.

7.3 LABELING OF MATERIALS

The contractor shall apply proper marking and labeling on all containers when the material is first placed inside the container. Hazardous material that is stored in bulk shall be posted with a sign that bears an appropriate label as well as the information required for waste area signs, as applicable.

During pre-cleaning activities or as otherwise encountered, the contractor may encounter waste streams that are placed into unidentified containers or the exact contents are unknown. For those instances, the contractor will mark the container with a "Non-Classified Material: Laboratory Analysis in Progress" label. This label will identify the material as an uncharacterized material stream. The contractor shall indicate on the label where the containerized material originated and, if a reasonable amount of information is available, the suspected material contents. An accumulation date will be added to the label. The contractor shall immediately notify Asarco when unidentified materials are first encountered. The material determination and accumulation of materials shall be managed in accordance with applicable rules and regulations.

7.4 MANAGEMENT OF CAMU APPROVED MATERIAL

Demolition material will be loaded with track or rubber-tired loaders and transported via trucks to the CAMU Phase 2 Cell. Friable ACM shall be wrapped and contained, loaded, weighed, transported, and placed in the CAMU Phase 2 Cell in such a manner that the integrity of the wrapping is not breached. At no time will friable material be exposed to the environment. Non-friable ACM does not require special containerization prior to placement in the CAMU Phase 2 Cell. The contractor shall strictly enforce the dust control measures, as described in the DCP, to ensure control of materials placed in the CAMU Phase 2 Cell. The placement of waste into the CAMU Phase 2 Cell will be governed by the specifications set forth in the approved CAMU Design Analysis Report (including the May 22, 2008 addendum) as discussed in Section 8.0. A copy of the CAMU Design Analysis Report will be provided to the contractor.

7.5 MATERIAL MANAGEMENT QUALITY CONTROL

Material management quality control will be accomplished through the use of administrative, engineering, and physical controls that will include, but not be limited to the following:

- Routine inspections of material storage areas,
- Curtailing of work activities during high wind conditions (over 15 MPH average hourly rate),
- Curtailing of material handling and transport during rain events with sufficient volume to create run-off,
- Pre-identification and handling of material requiring special management, and
- Decontamination of equipment used to handle material.

7.5.1 Inspections

The contractor shall implement inspection procedures to assure control of material that have been placed into material storage areas. The contractor shall conduct, at least weekly, inspections of the areas designated for container storage or transfer. The contractor shall inspect the area for evidence of deterioration of containers and secondary containment. Additionally, inspection of container labeling and accumulation dates will be completed to ensure that all containers are properly and legibly labeled. Accumulation dates will be reviewed for compliance. The contractor shall inspect containers and storage areas to ensure that they are not, have not, and will not be susceptible to any weather event that could cause release of a hazardous material streams onto the site or into the storm water system.

7.5.2 Work Stoppage

The contractor shall halt work when weather conditions are such that the spread of contaminated dust and debris is likely. These conditions typically exist when there is excessive wind and/or rain. Therefore, if wind with a 15 MPH average hourly rate or more are present, the contractor shall halt the handling of waste. If a rain event begins, the contractor shall evaluate the site conditions. If the rain presents no run-off, work activities will proceed uninhibited. In the rain presents run-off conditions, the work activities shall

cease until such time that a run-off potential is not present. The contractor will evaluate these conditions with Asarco's engineering consultant.

7.5.3 Special Material Handling and Segregation

The contractor will ensure that all material requiring special handling have been removed from the structures to be demolished. Special materials shall consist of ACM, UW, used oils, and liquid wastes, PCB ballasts, and refrigerant. UW, liquid wastes, PCB ballast, and refrigerant shall be removed from buildings and structures, handled, and stored as non-CAMU Phase 2 Cell materials. ACM material that is scheduled for placement in the CAMU Phase 2 Cell will be segregated.

7.5.4 Decontamination of Equipment

The contractor shall provide for the decontamination of equipment used in the handling and/or transport of demolition debris prior to the equipment leaving the site, or moving from a demolition zone to an area considered clean. The contractor shall establish a decontamination pad, in an area agreed and approved by Asarco. The location of the decontamination pad may change depending upon demolition activities and the evolution of the project site. This decontamination pad shall be situated on a concrete slab suitable for placement of heavy equipment.

Decontamination will consist of one or a combination of the brushing, vacuuming, or washing methods. The goal of the decontamination is to remove metal bearing dust and debris from the areas of the equipment that came into contact with this material. Upon completion of the decontamination activity, any removed dust and debris will be hauled to the CAMU Phase 2 Cell.

Equipment that has been decontaminated will be inspected upon completion to ensure the adequacy of the process and to document the process to ensure quality control.

8.0 WASTE HAULING, PLACEMENT, AND CAMU PHASE 2 CELL OPERATION AND CLOSURE

8.1 OPENING CAMU PHASE 2 CELL FOR WASTE PLACEMENT

The contractor shall be responsible for opening the CAMU Phase 2 Cell prior to the placement of waste material generated under this Work Plan. The contractor shall ensure that all site storm water controls are in proper working order, make any necessary repairs, and follow all state and federal storm water regulations. The temporary reinforced polyethylene (RPE) liner, currently covering the waste shall be removed by the contractor and saved for reuse once 2009 demolition waste placement is complete or shall be left in place, thoroughly perforated by the contractor so that it will not hold water, prior to waste placement, and replaced with a new temporary cover at the end of the 2009 construction season. Asarco prefers that the existing temporary RPE liner be reused. However, the contractor shall be responsible for determining the most cost effective option. If the temporary RPE liner is saved for reuse, it shall be peeled back with care taken not to tear or contaminate it. The contractor shall be responsible for ensuring that the liner currently in contact with hazardous waste does not come in contact with the clean side of the liner. If the clean side of the liner comes in contact with the dirty side of the liner, the contractor shall be responsible for replacing the liner. If the contractor determines that leaving the current RPE liner in place and furnish a new temporary liner is the most cost effective approach, the contractor shall cut the existing RPE liner and underlying 10-ounce non-woven geotextile into pieces that are 36 square feet or smaller. For both options, the contractor will need to remove the RPE liner and geotextile around the exterior of the CAMU Phase 2 Cell, including the liner buried in the anchor trenches, so that the liner does not extend past the boundary of the cell. Any RPE liner and geotextile material placed in the CAMU Phase 2 Cell shall be sized to less than 6-foot by 6-foot sheets before being placed in the CAMU Phase 2 Cell. The contractor shall place these sheets in the CAMU Phase 2 Cell under the direction of Asarco's engineering consultant.

8.2 CAMU WATER MANAGEMENT

Any storm water contacting the waste material shall not be discharged, but shall be transferred to the Asarco WTF. The contractor shall be responsible for management of water reporting to the CAMU Phase 2 Cell leachate collection sump while the CAMU Phase 2 Cell is open. Asarco's engineering consultant will be responsible for management of water reporting to the CAMU Phase 2 Cell leak detection sump throughout Work Plan implementation. The contractor shall have readily available pumps capable of pumping 400 gallons per minute in the event of a significant rainfall event. The contractor will remove any water from the leachate collection system, collect the water in a tank, and deliver the water to the Asarco's WTF.

8.3 ON-SITE DEBRIS TRANSPORTATION

The contractor shall implement a proactive approach to ensure that the transportation of waste debris does not generate dust or spread waste debris outside the limits of the loading area and the final CAMU Phase 2 Cell placement area. For all management of demolition debris, the contractor shall utilize the Dust Management Plan. The implementation of the Dust Management Plan will minimize airborne dust during the loading operation and constitute the initial dust prevention step during transportation. The contractor shall use end dump trucks, side dump trucks, 10-wheel dump trucks, or similar containerized equipment to haul the material to the CAMU Phase 2 Cell. All trucks must be equipped with sealed tailgates that will be closed during times of hauling to ensure that debris is not released outside the limits of the loading and dumping area.

8.4 OFF-SITE PREPARATION AND TRANSPORT

The contractor shall ensure that the debris leaving the facility for eventual placement in the CAMU Phase 2 Cell, is weighed, sampled, and moistened and is responsible for coordinating with Asarco's engineering consultant. ACM shall be weighed but not sampled. The contractor shall direct all haul trucks to an on-site scale for weighing. Asarco's engineering consultant shall weigh and photograph all waste being transported to the CAMU Phase 2 Cell. Representative samples will be collected from the trucks payload at the interval

specified in Section 9.0 of this Work Plan. The contractor shall erect and use a moistening station that consists of a scaffolding platform on which personnel will mist water on the loaded debris as a final step before exiting the site. The water spray will add a final moisture barrier and binder to the debris for the short distance haul to the CAMU Phase 2 Cell. All transport vehicles shall be limited to a maximum of 10 miles per hour during transport. Limiting speeds shall minimize dust from becoming airborne during transport and shall minimize kick-up from rolling tire action. In addition, the contractor shall place and maintain large gravel on a section of the haul route at the plant exit and CAMU exit, to remove loose dust and debris from haul truck tires. Once hauling of waste is complete, the contractor will place this gravel material in the CAMU Phase 2 Cell.

8.5 PLACEMENT OF WASTE

Once haul trucks arrive at the CAMU Phase 2 Cell, the material will be placed into the cell at a location specified by the contractor. ACM is the only material with a designated location within the CAMU Phase 2 Cell. Asarco's engineering consultant will direct the contractor to this location. A water truck shall be located in close proximity to the CAMU Phase 2 Cell to lightly mist debris and knock down any dust during the material dumping and spreading phase. The use of water will be kept to a minimum. Additional water will be applied to locations in the CAMU Phase 2 Cell to minimize the potential for fugitive dust emissions. Asarco reserves the right to stop placement of waste in the CAMU Phase 2 Cell if visible fugitive dust emissions are present. Materials will be placed and compacted in the cell to minimize voids, settlement, and damage to the liners. Demolition debris and waste soils will be placed and compacted in the cell in lifts not to exceed 2 feet thick across the bottom of the cell. All materials delivered to the cell for placement will require some segregation. This will allow consolidation of the materials during compaction and will result in a homogeneous mass with a minimal amount of voids. Specifically, bulk concrete and metal debris will be broken or otherwise reduced in size not to exceed a vertical dimension of 2 feet. There are no horizontal or width dimension restrictions other than the debris must fit in a haul truck to be transported to the CAMU Phase 2 cell. All material requiring size reduction will be resized at the structure demolition site using excavators with concrete breakers or shears before being

transported to the CAMU Phase 2 Cell. Large organic material (e.g. timbers) and manufactured metal will be placed horizontally in the cell as flat as possible to minimize voids. The railroad ties placed in the CAMU Phase 2 Cell will not be piled in one location, but will be spread out evenly throughout the CAMU Phase 2 Cell footprint. Asarco's engineering consultant will inspect the open CAMU Phase 2 Cell at least twice daily to assess the potential for windblown dispersion of fugitive dust.

8.6 WASTES REQUIRING SPECIAL MANAGEMENT

Wastes requiring special management include ACM and heavy metal dust from cleaning activities. The procedures for containerizing these wastes shall be conducted in the demolition areas prior to the materials being loaded on haul trucks. ACM and heavy metal dust will be handled according to the procedures outlined in Section 2.0 of this Work Plan and in the contractor's HMAP. All friable ACM shall be wrapped, contained, loaded, transported, and placed in the southwest corner of the CAMU Phase 2 Cell in such a manner that the integrity of the wrapping is not breached. Once the ACM has been placed in the cell, its location will be surveyed by Asarco's engineering consultant. The ACM shall be covered daily with soil to maintain the integrity of the wrapping. The location of the ACM shall be shown on the as-built drawings of the CAMU Phase 2 Cell. At no time will friable ACM be exposed to the environment. Non-friable ACM will be loaded and transported as described above for demolition debris. All ACM (both friable and non-friable) will be completely covered at the end of each work-day

8.7 WORK STOPPAGE

Work shall halt when weather conditions are such that the spread of contaminated dust and debris is likely. These conditions typically exist when there is excessive wind and/or rain. Therefore, if wind with sustained readings of 15 MPH (average hourly rate) or more occur, the handling and hauling of waste both on-site and off-site will halt. The sustained wind speeds will be monitored by Asarco's engineering consultant through the use of a calibrated on-site anemometer and through data provided by the National Oceanic and Atmospheric Administration (NOAA) at www.noaa.gov for wind speeds at the Helena Airport.

Furthermore, if a rain event begins, site conditions will be re-evaluated. If a rain event begins, the contractor shall evaluate the site conditions. If the rain presents no run-off, work activities will proceed uninhibited. In the rain presents run-off conditions, the work activities shall cease until such time that a run-off potential is not present. The contractor will evaluate these conditions with Asarco's engineering consultant. In the event that transport is halted, no additional trucks will be loaded and trucks containing wastes will be covered until conditions improve.

8.8 DECONTAMINATION AND INSPECTION OF EQUIPMENT

The equipment used in the handling and/or transport of demolition debris will be decontaminated prior to the equipment leaving the site, or moving from a demolition zone to an area considered clean. Decontamination pads, a concrete slab suitable for placement of heavy equipment, will be established, in areas agreed upon with and approved by Asarco. The location of the decontamination pads may change as demolition activities progress. However, all equipment will be decontaminated within close proximity to exits from the Asarco facility. The equipment that has been decontaminated will be inspected upon completion to ensure the adequacy of the process and to document the process to ensure quality control prior to the transport vehicle leaving the site.

Decontamination will consist of one or a combination of brushing, vacuuming, or washing methods. The goal of the decontamination is to remove heavy metal laden bearing dust and debris from the areas of the equipment that contacts the waste. Upon completion of the decontamination activities, any removed dust and debris residue will be hauled to the CAMU Phase 2 Cell.

Haul trucks leaving the CAMU Phase 2 Cell will be traveling on paved haul roads and will not be decontaminated until enter the Asarco smelter facility, where they will be decontaminated on one of the decontamination pads. Any large debris will be dislodged from haul trucks as they leave the CAMU Phase 2 Cell. The section of haul road between the

CAMU Phase 2 Cell and the Asarco facility will be monitored and swept on a regular basis. Asarco's engineering consultant shall inspect the haul road twice daily.

Transport vehicles will be inspected periodically to ensure that truck beds and gates are properly sealed and that debris is not building up. Full decontamination of vehicles that are leaving the Asarco facility should occur periodically.

The equipment used in the CAMU Phase 2 Cell for spreading and compacting waste will be decontaminated at the Asarco facility. This equipment will be placed on trailers and driven via the haul road back to the Asarco facility for decontamination in a designated area.

8.8.1 Work and Road Surface Cleaning

The contractor shall implement the road surface cleaning procedures set forth in the Dust Control Plan.

8.9 SPILL MITIGATION

Spills of soils or debris being transported to the CAMU Phase 2 Cell shall be prevented by constant maintenance of trucks to make sure they are properly sealed and in good working order. In addition, traffic control and slow truck speeds will minimize the occurrence of accidents. If waste is spilled in route to the CAMU Phase 2 Cell, the hauling of waste will halt and the spilled waste will be cleaned using clean decontaminated equipment. If the spill occurs on the haul road, the road will be swept clean.

The twice-daily inspections, Section 8.10, of the area surrounding the CAMU Phase 2 Cell shall include observations for visible fugitive emissions. If a release from the area is observed during an inspection, the waste will be removed and cleaned using clean decontaminated equipment and placed in the CAMU Phase 2 Cell.

8.10 SITE INSPECTIONS – OPERATION

Asarco's engineering consultant will perform inspections of areas surrounding the CAMU Phase 2 Cell and the haul road between the CAMU and ASARCO smelter facility twice daily when the CAMU cell is in operation. Daily inspections of the road used for hauling waste will occur when the haul road is in use. While the CAMU cell is in operation it will be inspected once per week by Asarco's engineering consultant. Quarterly monitoring of groundwater quality and semi-annual site inspections will ensure that public health and safety are maintained at the site. Monitoring and inspection protocol shall be conducted consistent with the CAMU Phase 2 Cell Operating Plan.

8.10.1 Daily Inspections

While the landfill is in operation, inspection of the grounds surrounding the CAMU shall be inspected twice daily. These inspections shall include an assessment of the potential for windblown dispersion of fugitive dust from the CAMU and a visual inspection of the grounds surrounding the CAMU for any visible releases of fugitive dust from the CAMU cell. The haul route used by trucks leaving the CAMU and returning to the ASARCO smelter facility shall also be inspected twice daily to ensure that it remains clean and free of dust and debris. The remainder of the haul road shall be inspected once per day to ensure that it is free of dust and debris. Daily inspections shall be documented and recorded on the Daily Inspection Form included in the CAMU Design Analysis Report and any problems found will be reported to the project manager and addressed immediately.

8.10.2 Weekly Inspections

While the landfill is in operation, it shall be inspected weekly and after significant storms to detect evidence of any deterioration, malfunctions, or improper operation of run-on and runoff control systems, and the proper performance or presence of liquids in the leachate collection and leak detection system. Inspection of the perimeter fence, gates, condition of haul roads, condition of storm water pond, presence of precipitation run-off or ponded liquids, condition of decontamination pads, and the condition of haul trucks will be included

in weekly inspections and any maintenance needed will be recorded on the Weekly Inspection Form included in the CAMU Design Analysis Report and addressed appropriately.

8.11 CLOSING THE CAMU PHASE 2 CELL

Upon completion of placement of demolition debris and waste soils in the CAMU Phase 2 Cell, the temporary RPE CAMU cap shall be constructed. This component of the CAMU Phase 2 Cell temporarily closes the CAMU Phase 2 Cell and prevents infiltration of precipitation. The temporary RPE cover consists of a 24-mil RPE , underlain by a geotextile, as specified in the CAMU Design Analysis Report, "Design Analysis Report, Asarco East Helena, Corrective Action Management Unit (CAMU) Phase 2 Cell, July, 2008", approved by the EPA. The contractor shall grade all waste placed in the CAMU Phase 2 Cell according to the specifications in the CAMU Design Analysis Report to allow for proper drainage off the temporary cover. In addition, the contractor shall ensure that no rebar, sharp metal, or sharp concrete edges protrude from waste. The temporary cover shall be installed according to the design drawings and specifications presented in the approved CAMU Design Analysis Report.

9.0 WASTE SAMPLING AND ANALYSIS

Asarco's engineering consultant in coordination with the contractor shall implement the components of the waste sampling and analysis. The waste sampling and analysis section of the Work Plan is designed to assess representative samples of waste being hauled and placed in the CAMU Phase 2 Cell. This section provides the methodology and procedures for each sampling and analysis task. The collection of representative samples and characterization of waste being hauled to the CAMU Phase 2 Cell will conduct the follow tasks:

- Description of payload inside sampled trucks,
- Photo-documentation the truck payload,
- Grab sampling of wood, dirt, dust, brick, railroad ties, and concrete materials, and
- Laboratory analyses of collected grab samples.

9.1 SAMPLING FREQUENCY AND PROCEDURES

The cleaning and demolition waste and miscellaneous railroad ties being hauled to the CAMU Phase 2 Cell for disposal will be sampled from the payload of the haul truck, after the haul truck has been weighed but prior to the haul truck leaving the Asarco facility. The payload of each truck will be recorded and a photograph will be taken.

During Work Plan implementation, four work areas will have demolition material removed and transported to the CAMU Phase 2 Cell. These work areas are presented in Table 9-1. The materials being hauled to the CAMU Phase 2 Cell from cleaning activities are not included in Table 9-1, as quantities of these materials cannot be determined. The work area designations are based on the contractors schedule for demolition, processes that occurred in these areas, and the materials used to construct the buildings. A sample will be collected from one out of every 20 trucks hauling waste from each work area. At least one sample will be obtained from each of the four areas for every 20 haul trucks that transport waste from that area to the CAMU Phase 2 Cell. The CSHB ventilation system and stack are mainly composed of metal. The majority of the material should be recyclable. If non-recyclable

material is hauled from this area to the CAMU Phase 2 Cell, one sample will be collected from every 20 haul trucks, assuming that the material being hauled is not metal. In addition, one sample will be collected from every 20 haul trucks from waste generated by cleaning activities. The quantity of material generated by cleaning activities and the quantity of railroad ties to be hauled to the CAMU Phase 2 Cell is unknown and is therefore not included in Table 9-1.

TABLE 9-1. MATERIAL VOLUMES AND ESTIMATED SAMPLES

2009 Work Plan Work Areas	Material Volume (cubic yards)	Number of Haul Trucks (assume 15 yards/truck)*	Minimum Number of Samples (1/20 trucks)**
Sample Mill, Crushing Mill, Soil Pile by Sample/ Crushing Mill, Hopto Pad, Storage Bins, and Conveyor Gallery, Acid Dust Facility.	7100	474	24
Sinter Stockpile Building, Highline Railroad, Abandoned and New Breaking Floor, Groundwater Sump.	1,370	92	5
Concentrate Storage and Handling Building Ventilation System	0	0	0
400' D&L Stack, 200' Acid Stack, 425' Blast Furnace Stack	6,890	460	23
Total	**15,360**	**1,026**	**52**

Number of haul trucks assumes a 15 cubic yard capacity. Alternative truck haul capacities may be used by the contractor (typically a range of 10 cubic yards to 20 cubic yards).
The actual number of samples may vary based on the capacity of the haul trucks used and the number of truck loads. The number of samples will be adjusted to the actual number of truckload transported to the CAMU.

Each haul truck payload to be sampled will be divided into five areas. A grab sample shall be collected at a random location within each of the five areas. If, based upon Asarco's engineering consultant's determination, a location within a sampling area can be visually identified to be potentially the worse case for that area, the sample will be obtained from that location to bias the sample. If, based on Asarco's engineering consultant's judgment, it is not possible to identify a worse case location, the sample will be obtained from a random location. All five samples will be combined into one composite sample and mixed thoroughly. This composite sample will be forward to the laboratory for analyses.

A sampling notebook shall include the location and work area where waste is being hauled from, a description of the materials in the haul truck payload, the sample identification number, and the date and time the sample is taken. A photograph of the truck payload will also be collected.

9.2 LABORATORY PROCEDURES

Laboratory analysis will be performed for total metals using analytical methods shown in Table 9-2.

TABLE 9-2. CAMU SOILS ANALYTICAL PARAMETER LIST

Parameter	Analytical Method[1]	Practical Quantitation Limit (mg/Kg)
Total Metals — Digestion by EPA Method 3050 (Method 7471 for Mercury)		
Aluminum (Al)	6010B/6020	5
Antimony (Sb)	6010B/6020	5
Arsenic (As)	6010B/6020	5
Barium (Ba)	6010B/6020	5
Beryllium (Be)	6010B/6020	5
Cadmium (Cd)	6010B/6020	1
Chromium (Cr)	6010B/6020	5
Cobalt (Co)	6010B/6020	5
Copper (Cu)	6010B/6020	5
Gold (Au)	6010B/6020	5
Iron (Fe)	6010B/6020	5
Lead (Pb)	6010B/6020	5
Manganese (Mn)	6010B/6020	5
Mercury (Hg)	7471	1
Nickel (Ni)	6010B/6020	5
Selenium (Se)	6010B/6020	5
Silver (Ag)	6010B/6020	5
Thallium (Tl)	6010B/6020	5
Vanadium (V)	6010B/6020	5
Zinc (Zn)	6010B/6020	5

NOTES: (1) Laboratory analytical methods are ICP and ICP-MS techniques from EPA SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.*

11.0 EXPOSED SOIL SAMPLING

Asarco's engineering consultant shall be responsible for the soil sample collection tasks outlined in this Work Plan section. Soil samples will be collected from designated areas where exposed soils are present within the demolition footprint. As part of site surveys conducted in 2007, exposed soil areas within or adjacent to cleaning and demolition footprint areas were identified in the field and mapped. Prior to conducting the exposed soil sampling procedures, visually obvious dust (typically indicated by dark gray or black color and fine-grained, silty texture) within demolition footprint areas will be removed by the contractor. Asarco's engineering consultants shall conduct soil sampling and the contractor will provide personnel and equipment to conduct the test pit excavation. In 2009, a total of seven samples shall be collected. The sample locations are shown in red on Sheet 10 in Appendix B. Asarco will submit the soil sampling results including laboratory QA/QC information, sample receipt checklists, and chain-of-custody to the MDEQ and EPA as part of their 2009 Work Plan summary report.

11.1.1 Exposed Soil Area Sampling Methods

The identified exposed surface soil areas that will be encountered within the cleaning and demolition footprints shall be sampled and analyzed for the following indicator parameters: arsenic, copper, cadmium, lead, zinc and selenium, and supplemental parameters: aluminum, antimony, barium, beryllium, chrome, cobalt, iron, manganese, mercury, nickel, silver, thallium and vanadium using wet chemistry standard EPA methods. The soil sample collection and analytical matrix is summarized in Table 11-1.

11.1.1.1 Initial Exposed Surface Soil Characterization

A total of five surface (0 - 4" increment) soil samples shall be collected from each sample site in identified exposed soil areas and composited into one representative sample of the area. Surface soil samples will be collected using hand tools (hand shovels, trowels, or hand augers). The samples will be stored in ziploc bags and archived for analysis. All analytical work will be conducted before the 6-month holding time limit for metals. The location of

each soil sampling site will be cataloged using sample numbers and GPS coordinates. A photograph of each sample site will be taken. The sampling Standard Operation Procedures (SOPs), analytical parameters, and methods are summarized in Table 11-1.

The surface soil samples shall be collected from exposed soil areas using the same techniques and procedures used for Interim Measures (IM) and RCRA Facility Investigation (RFI) activities, as described in the IM and RFI Work Plans (Hydrometrics, 1999b and Hydrometrics, 2000).

11.1.1.2 Exposed Soil Subsurface Profile Sample Collection

The exposed area sub-surface soil profile samples will be collected at the depth intervals shown in Table 11-1 and analyzed for the indicator parameters arsenic, cadmium, copper, lead, zinc and selenium. Samples shall be collected from test pits advanced using standard excavation equipment. The test pits will be advanced to standard excavation practical limits of 15 feet or until equipment refusal is encountered. Excavator equipment refusal is defined by the inability to advance the excavation in the event of encountering the groundwater table, or in the event hard boulder strata conditions prohibit the ability of the excavator to advance the test pit.

The test pit subsurface soil samples will be analyzed using standard EPA wet chemistry methods (EPA Methods SW 6010/6020) at a commercial laboratory. The final interval samples will also be submitted to a commercial laboratory for definitive analysis using standard EPA wet chemistry methods (EPA Methods SW 6010/6020) and Synthetic Precipitation Leachate Procedure (SPLP).

The soil sample collection and analytical matrix is summarized in Table 11-1. As the table shows, initial and final samples will be analyzed for indicator parameters (As, Cd, Cu, Pb, Se, and Zn) and for supplemental parameters (Al, Sb, Ba, Be, Cr, Co, Hg, Fe, Mn, Ni, Ag, Tl, and V). The final sample increment will also be analyzed using the Synthetic Precipitation Leachate Procedure (SPLP).

TABLE 11-1. DEMOLITION FOOTPRINT UNPAVED EXPOSED AREA SOIL, SAMPLE COLLECTION AND ANALYTICAL MATRIX

(H:\files\007 asarco\9006\2009 cleaning-demo plan\table 11-1.xls\tab3-3 sampmatrix)

Sub-surface soil samples will be collected directly from the soil excavation equipment bucket in the following increments. Sub-surface soil increments are: 4 - 12", 1 - 2', 2 - 4', 4 - 6', 6 - 8', 8 - 10', 10 - 12', and 12 - 15'. One soil sample will be collected directly from the backhoe bucket for each increment within an identified exposed soil sample area.

Sub-surface soil samples will be collected from exposed soil areas using the same techniques and procedures used for Interim Measures (IM) and RCRA Facility Investigation (RFI) activities, as described in the IM and RFI Work Plans (Hydrometrics, 1999b and Hydrometrics, 2000). Samples will be stored in ziploc bags and shipped to the laboratory for analysis.

12.0 PLUG AND ABANDON UNDERGROUND UTILITIES

The contractor shall be responsible for plugging and abandoning underground utilities outlined in this Work Plan section and is responsible for coordinating this task with Asarco's engineering consultant. Underground piping and structures exist within the footprint in which demolition will take place. The underground piping and structures will be plugged and sealed in place once demolition is complete but prior to final grading and the interim cap being installed. The utility locates shall be performed by the contractor and compared with the utility drawings and underground utility information provided by Asarco to identify as many underground utilities as possible. The underground utility maps provided by Asarco are included as Sheets 11 and 12 in Appendix B. The abandoned underground utilities that shall be flow filled are illustrated on Sheet 13 in Appendix B.

Utility piping larger than 6 inches in diameter will be flushed with water and blown out with air to ensure flow within the pipes. The sanitary sewer lines that are scheduled for plugging and abandoning will be flushed with water containing a bleach mixture and blown out with air. The contractor should anticipate that some utilities/piping may contain some residual material (e.g. plant water, residual pipe sediment, sewage) from previous activities and will need to take necessary precautions in the handling and disposal of any such materials. The water collected from the flushing of the underground utilities will first be routed to Asarco's on-site car wash thickener building for solids separation and then to Asarco's WTF. Large solids (if any) will be dried at the car wash thickener building prior to placement in the CAMU Phase 2 Cell. Any fine sediment (if any) that pass through the car wash thickener process will be managed in the sediment handling system of Asarco's WTF and transported off-site for disposal. Sediment that may be present in the ferrous-containing plant water pipe and plant water return lines will be comprised primarily of rust. Further characterization of the sediments removed from the flushing of the underground utilities will not take place but will be managed as previously described.

All existing underground utilities (e.g. piping conduits, fire plugs, or sumps) will be plugged/capped and abandoned in place along their entirety utilizing flow fill or other approved material. Flowable fill or control density fill (CDF) shall be used as a low strength, self consolidating fill material for confined spaces which can be easily excavated at a later time. CDF is characterized by a high maximum slump of 8 inches. CDF shall consist of Portland Cement, aggregates, water, and fly ash. Chemical admixtures and other mineral admixtures may be used. The actual mix proportions and flow characteristics shall be determined by the producer of the CDF to meet site conditions. In all piping systems, the flow fill will be introduced using pressure not to exceed 100 psi. The grouting will continue at the inlet of the underground utility until a steady flow of grout exits the pipe outlet. The outlet will be sealed then the inlet will be grouted under pressure using a pressure between 50 and 100 psi.

One 4-foot diameter groundwater sump exists within the demolition footprint near the abandoned breaking floor building as shown on Sheet 13 in Appendix B. This sump is 14.5 feet deep and shall be abandoned. This sump was used to dewater the Direct Smelt Building and was never used as a monitoring well. The sump shall be abandoned under the State of Montana well abandonment regulations (ARM 36.21.670). Once the sump is clean and the above ground section is demolished, it will be filled with cement grout to grade using the specifications required under ARM 36.21.675.

- A minimum 10-ounce non-woven geotextile,
- A prepared sub-grade consisting of fumed slag fill for grading purposes, and
- Existing soils, concrete slabs and/or concrete foundations.

Upon completion of the demolition operations, footprint soil sampling, and area clean-up, the contractor shall remove all debris and items from the slab that could possibly penetrate the geotextile and geomembrane. This includes, but is not limited to, protruding rebar, pipes, and sharp concrete. The contractor shall utilize the existing on-site fumed slag as fill material over the identified areas. This fumed slag will be placed and rough graded to create the positive drainage required per Sheet 14 and 15 in Appendix B. The fumed slag has been used as a grading material at the plant site in the past and possesses good physical characteristics for fill or sub-foundation uses (granular material and compacts wells). Once the slag fill is graded to allow for proper drainage, it shall be rolled with a smooth drum vibrating roller to create a smooth surface for temporary liner placement.

The geotextile and geomembrane shall be laid, seamed, and secured as detailed on Sheet 16 in Appendix B unless the contractor proposes alternative methods that are approved by Asarco. Additionally, sandbags will be placed intermittently within the center liner area to prevent the liner from being picked up by wind uplift or other forces. If the contractor chooses to use tethered tires to secure the interim caps, the number of tires should be limited. The contractor will warranty their work and may present alternative anchoring techniques acceptable to Asarco to ensure their warranty. The contractor will be responsible for all future repairs to the liner for a period of one year from the date of installation. As an added preventative measure, the contractor shall utilize sandbags made of UV Resistant 9-mil PE, which will provide superior UV resistance (compared to standard plastic woven sandbags) to prevent breakdown by sunlight. All sandbag openings shall be secured using heavy-duty zip ties.

13.4 MAINTENANCE OF INTERIM CAP

13.4.1 Site Inspection

Asarco shall conduct periodic inspections of the interim cap to ensure that the interim cap systems are performing adequately and to identify problems and provide proper maintenance of interim cap systems. The inspection program will involve three types of inspections: (1) informal inspections, (2) periodic technical inspections, and (3) special inspections after extreme events.

The informal inspection is actually a continuing effort by on-site personnel, performed in the course of their normal duties. Periodic technical inspections and inspections after extreme events will be performed by onsite Asarco staff (or other technical representatives) familiar with the design and construction of the capping systems. The periodic technical inspection will be performed monthly to document the condition of the cap components. Special inspections are very similar to periodic technical inspections but are performed only after an extreme event such as a rare rainstorm, tornado, or earthquake.

The inspection of the interim cap system will typically involve walking the entire site in a systematic fashion that ensures a comprehensive review. If any problem or deficiency is found, the inspector should record the location on a field sketch. A complete description of the affected area, including all pertinent data (i.e., size of the area and other descriptive remarks such as exposed synthetic materials) should be recorded on the appropriate reporting forms. An accurate and detailed description of observed conditions will enable a meaningful comparison of conditions observed at different times.

Photographs may be helpful in documenting problems. Provisions should be made to keep a photographic log of problems, repairs, and general site conditions. This log will provide valuable information when evaluating the performance of the interim cap system and when planning repair strategies.

It is important to have a record of site conditions at various stages after capping. Good documentation will provide valuable information to help maintenance and repair planning. Inspection checklists to assist in the inspection and documentation procedures should be developed and modified as needed throughout the interim capping period. The checklist will (at a minimum) contain items to evaluate such as membrane condition, sand bag condition, liner seams, liner/concrete attachments and site drainage. A copy of an example inspection form is attached in Appendix D.

13.4.2 Site Security

The interim cap will be contained within the fenced Asarco facility and will be kept secured so that people or animals do not disturb the interim cap. Site access by ongoing plant or demolition operations will be limited through the use of barricades, barrier tape, or temporary fencing. Plant personnel will advise contractors conducting site activities of access limits within or near capped areas.

13.4.3 Site Maintenance

As shown in Table 13-1, there are four different types of maintenance tasks listed by priority rather than by frequency. Table 13-1 is provided as a guide to prioritize the different types of maintenance activities in proper perspective. The different types of maintenance are also discussed in the following subsections.

TABLE 13-1. PRIORITY OF MAINTENANCE TASKS

Priority	Type of Maintenance	Description and Example
1	Emergency	A situation requiring immediate attention (for example, fire or flood).
2	Preventative	Scheduled inspection and minor repairs carried out during inspection (for example, cleaning of membrane liner).
3	Corrective	Corrective maintenance required as a direct result of scheduled inspection (for example, repair of torn membrane liner).
4	Housekeeping	Routine housekeeping of buildings and grounds (for example, disposal of debris and general housekeeping).

15.0 PROJECT OVERSIGHT

Asarco shall contract a engineering consultant to conduct the project oversight associated with the implementation of this Work Plan. Project oversight will include oversight of all activities outlined in this Work Plan to ensure the contractor meets all expectations and provisions. In addition, Asarco will hire third party independent oversight to perform quality assurance on the removal and reinstallation of the temporary cap on the CAMU Phase 2 Cell.

g. threshold of recoverable metals and maximum allowable toxic metals), (2) a demonstration that the receiving facility is in compliance with all applicable environmental requirements, (3) a copy of the contractual agreement between Asarco, its broker and the receiving facility, (4) the name of the state or provincial regulatory contact and facility contact.

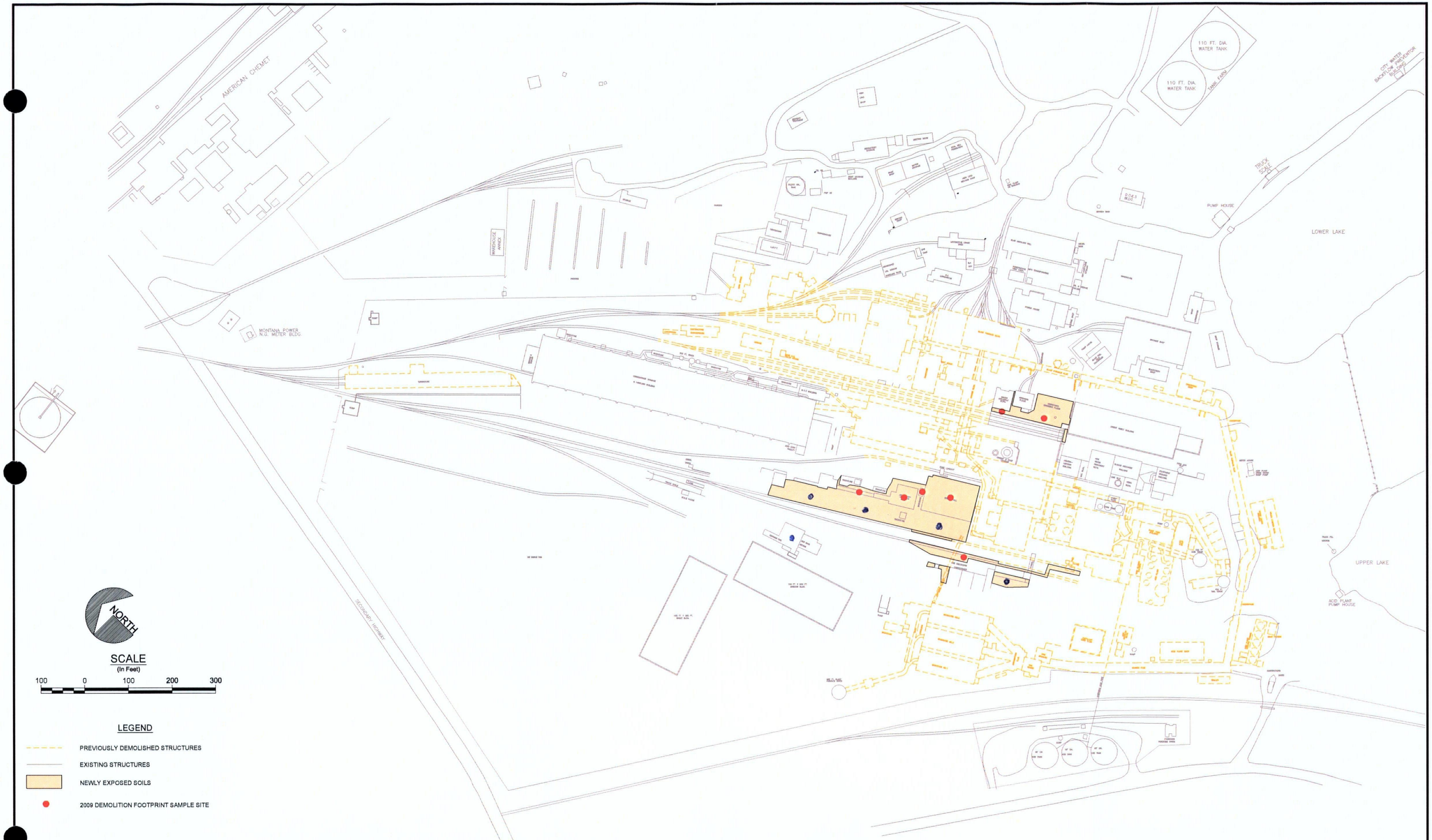
Quarterly reports will not be required after submittal of the 2009 Work Plan Completion Report.

16.2 ANNUAL REPORTING

Within thirty (30) days, but, no later than March 31, 2010, after Asarco concludes that it has fully implemented the materials removal outlined in the 2009 Cleaning and Demolition Work Plan, Asarco shall submit a 2009 Work Plan Completion Report to the MDEQ and EPA. The contents of the Work Plan Completion Report will include:

a. A description of the cleaning efforts conducted;
b. If applicable, documentation of all shipments of recyclable materials and/or hazardous wastes;
c. Summaries of all problems or potential problems encountered during the reporting period; and
d. Certification that the Work Plan has been fully implemented.

Each month, Asarco submits certified progress reports to EPA, which discuss the actions taken by Asarco in achieving compliance with the Decree. These monthly reports will discuss progress in implementing the components of this Work Plan.



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ASARCO LLC - EAST HELENA PLANT
2009 WORK PLAN
CLEANING & DEMOLITION FOOTPRINT EXPOSED SOIL SAMPLE AREAS

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2009 CLEANING AND DEMOLITION PROGRAM
AND
2009 INTERIM MEASURES WORK PLAN ADDENDUM

ASARCO EAST HELENA PLANT

APPENDIX C

March 2009

EXAMPLE INSPECTION FORM

2009 CLEANING AND DEMOLITION PROGRAM

AND

2009 INTERIM MEASURES WORK PLAN ADDENDUM

ASARCO EAST HELENA PLANT

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March 2009
Revised April 2009

2009 CLEANING AND DEMOLITION PROGRAM

AND

2009 INTERIM MEASURES WORK PLAN ADDENDUM

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March 2009
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ASARCO EAST HELENA PLANT

1.0 INTRODUCTION

1.1 OVERVIEW

Asarco LLC (Asarco) has prepared this 2009 Cleaning and Demolition Program and 2009 Interim Measures Work Plan Addendum (collectively referred to as the Work Plan) to fully describe the activities that will be implemented during calendar year 2009 at the East Helena Plant to address its obligations under the Montana Administrative Order on Consent (AOC). For work plans submitted pursuant to the AOC, Asarco shall describe the work, which constitutes above ground removal of hazardous wastes during the demolition of on-site structures. All other remaining engineered structures and ancillary equipment and all other remediation waste and contamination shall be addressed under terms of the RCRA Consent Decree (Decree). Accordingly, this Work Plan describes the measures that Asarco will undertake to fulfill the Decree's interim measure goals for conducting investigations or corrective actions that occur in connection with the scheduled activities. In recognition that implementation of the AOC obligations and Decree goals are linked, the Montana Department of Environmental Quality (MDEQ) and United States Environmental Protection Agency (EPA) have agreed that Asarco should prepare a single Work Plan for simultaneous approval.

1.1.1 Montana Administrative Order of Consent

Asarco and MDEQ entered into a 2005 Consent Decree, on February 15, 2005, to resolve alleged violations of the Montana Hazardous Waste Act (MHWA) and Administrative Rules

of Montana (ARM). The 2005 Consent Decree required Asarco to develop and implement yearly work plans designed to remove, store, and properly dispose or recycle all remaining hazardous waste and recyclable materials from identified process units located within Asarco's East Helena Plant. On October 2, 2007, Asarco and the MDEQ entered into a 2007 Administrative Order on Consent (AOC), which allows Asarco to continue with the cleanup processes established under the work plan provisions of the 2005 Consent Decree. The 2007 AOC requires Asarco to develop and implement yearly work plans for calendar years 2007-2012 to remove, store, and properly dispose or recycle all remaining hazardous waste and/or secondary material located in the process units, pollution control devices, and storage units and other identified areas of the facility. This Work Plan will accelerate the six-year schedule by completing Asarco's AOC obligations by the end of calendar year 2009. Asarco and the MDEQ developed Appendix A (Comprehensive List of All Process Units and Other Areas of Interest) as a guide to identify all areas to be addressed under the AOC.

1.1.2 RCRA Consent Decree

Asarco and the United States Environmental Protection Agency (EPA) entered into a Consent Decree (RCRA Consent Decree, U.S. District Court, 1998) to initiate the corrective action process in accordance with the Resource Conservation and Recovery Act (RCRA) and the Clean Water Act (CWA). With respect to this Work Plan, the Decree regulates certain investigation and/or corrective measures including 1) plugging and abandoning affected underground utilities, 2) collecting and analyzing demolition footprint exposed soils, 3) utilizing the CAMU Phase 2 Cell for hazardous waste management, and 4) placing and maintaining interim caps.

In 2008, Asarco submitted two separate Work Plans to the MDEQ and EPA for work scheduled for calendar year 2008. The procedures described in this Work Plan combine these past efforts by presenting a comprehensive program of the 2009 project components. Once approved by both MDEQ and EPA, Asarco intends to implement the tasks outlined in this Work Plan thought either a bid solicitation process or change order through Asarco's

existing demolition contract. Unless otherwise noted, the selected contractor will be responsible for the work contained in this Work Plan.

1.2 SITE LOCATION AND DESCRIPTION

The Asarco East Helena facility is a former lead smelter located on approximately 141 acres. The facility is surrounded by agricultural property on the west; Prickly Pear Creek and agricultural property on the east; Montana Highway 12 and residential properties to the north; and agricultural property to the south. Appendix B includes a site vicinity map (Sheet 1) and a site plot plan (Sheet 2). In 2008, Asarco constructed an on-site Corrective Action Management Unit (CAMU) Phase 2 Cell for the disposal of waste generated from cleaning and demolition activities at the East Helena Smelter Facility. The CAMU Phase 2 Cell location is shown on Sheet 1 in Appendix B.

1.3 PREVIOUS WORK

Throughout the last several years, Asarco has implemented work plans that describe the removing, storing, and disposal or recycling of hazardous waste or secondary material located in process units, pollution control devices, storage units, and other areas of interest. These areas are shown on Sheet 2 in Appendix B. The January 2009 Comprehensive List of Process Units and Other Areas of Interest (AOIs) (Appendix A) summarizes past cleaning efforts by describing the process unit's operational status, dates that cleanup activities occurred, and dates of MDEQ inspections. While MDEQ maintains a complete inventory of AOIs and their current cleanup status, it is recognized the Appendix A represents a similarly accurate record.

1.4 PROJECT DESCRIPTION

The buildings and structures addressed in this Work Plan have been categorized into either clean, clean prior to demolition, or demolish, as further outlined in the following table. The buildings, structures, and areas listed in Table 1-1 are illustrated on Sheet 2 (Appendix B).

TABLE 1-1. PROJECT BUILDINGS AND STRUCTURES

Clean	Clean Prior to Demolition	Demolish
o Hydrogen Peroxide Storage Tanks	o Sample Mill and Dust Loadout Baghouse	o Sample Mill
o High Grade Building	o Crushing Mill Baghouses	o Crushing Mill
o Truck Scale	o Sinter Stocking Building Baghouse	o Hopto Pad, Storage Bins, and Conveyor Gallery
o Locomotive Crane Shed	o Concentrate Storage and Handling Building Baghouses , Ventilation ductwork, and Stack Base	o Acid Dust Facility
o Cement and Dust Silos	o Hopto Pad, Storage Bins, and Conveyor Gallery	o Sinter Stockpile Building
o Soda Ash and Lime Silo and Coke Hopper	o Acid Dust Facility	o Highline Railroad
o Pump House	o Groundwater Sump	o Abandoned and New Breaking Floor Buildings
o Storm Water Sump		o Groundwater Sump
o Direct Smelt Building		o CSHB Ventilation System and Stack
o Coverall Buildings		o Sinter Plant, Acid Plant, and Blast Furnace Stacks
o Adobe Shed		o Miscellaneous Railroad Ties
o Utility Support Towers		
o Concentrate Storage and Handling Building		

All of the buildings and structures listed in Table 1-1 with the exception of the high grade building, truck scale, pump house, direct smelt building, coverall buildings, adobe shed, and concentrate storage and handling building will be subject to pre-cleaning procedures as further described in Section 4.0 of this Work Plan. Pre-cleaning of these structures will not be necessary since they will continue to be utilized following Work Plan implementation. The buildings and structures highlighted in blue on Sheet 4 (Appendix B) are scheduled for cleaning and are further described in Section 5.0. The removal of hazardous waste from

these building and structures will be deemed complete when no process materials are visible. The buildings and structures highlighted in teal on Sheet 5 (Appendix B) are scheduled for cleaning prior to demolition. The buildings and structures highlighted in green on Sheet 6 (Appendix B) are scheduled for demolition and are further described in Section 6.0. Two stockpiles of used railroad ties are currently stored near the front entrance of the Asarco facility and on the slag pile. These ties highlighted in blue on Sheet 2 and 6 (Appendix B) are scheduled for placement in the CAMU Phase 2 Cell, as described in Section 6.0.

This Work Plan outlines the approach that shall be taken by Asarco and the contractor during all phases of the work. The sequencing of critical tasks prescribed in the Work Plan include:

- Development of the Work Plan,
- Simultaneous Approval of the Work Plan by MDEQ and EPA,
- New Demolition Contract or Change Order to Existing Demolition Contract,
- Pre-Construction Contractor Obligations (Section 2.0),
- Historic Survey and Recordation (Section 3.0),
- Pre-Cleaning Tasks (Section 4.0),
- Cleaning Tasks (Section 5.0),
- Demolition Tasks (Section 6.0),
- Waste and Recyclable Material Management (Section 7.0),
- Waste Hauling and Placement (Section 8.0),
- Waste Sampling and Analysis (Section 9.0),
- Final Cleaning (Section 10.0),
- Exposed Demolition Footprint Soil Sampling (Section 11.0),
- Plug and Abandon Underground Piping (Section 12.0),
- Capping of Demolition Areas (Section 13.0),
- Inspections of Interim Caps (Section 13.0),
- Demobilization and Contract Closeout (Section 14.0),
- Oversight of Project (Section 15.0), and
- Project Reporting (Section 16.0).

2.0 PRE-CONSTRUCTION CONTRACTOR OBLIGATIONS

Prior to the initiation of field operations, the contractor shall prepare, secure, establish, and/or conduct the following plans, permits, schedules, precautions, measures, facilities and/or meetings.

- Site-Specific Health and Safety Plan (HSP),
- Hazardous Materials Abatement Plan (HMAP),
- Recyclable Materials Plan (RMP),
- Dust Control Plan (DCP),
- Stack Demolition Plan (SDP),
- Community Relations Plan (CRP),
- NESHAP Permit,
- Construction Schedule,
- Storm Water Containment, Run-off Precautions, and Decontamination Water Management,
- Site Security Measures,
- Administrative, Staging, and Decontamination Facilities,
- General Construction Permits, and
- Pre-Construction Meeting.

The contractor shall follow all applicable federal, state, and local laws and regulations. Additional precautions not listed in this section may be required. The contractor shall be responsibility for determining which laws and regulations apply to the work being performed. The contractor will be responsible for coordination and scheduling of all tasks with Asarco's engineering consultant. Asarco reserves the right to stop all work at the contractors expense if the contractor doesn't meet either the obligations set forth in this Work Plan or the requirements set forth by the contractor in their approved HSP, HMAP, RMP, DCP, SDP, or CRP.

2.1 SITE-SPECIFIC HEALTH AND SAFETY PLAN (HSP)

The contractor shall develop a site-specific Health and Safety Plan (HSP) for review and approval by Asarco. The purpose of the plan shall be to protect personnel and the environment within the facility and the general public and environment in adjacent properties and neighborhoods. One of the many critical components of the HSP shall include conducting tailgate safety meetings at the beginning of every work shift, during new phases of operation, when new personnel are introduced to the site, and when site conditions warrant such meetings. These meetings shall identify potential workplace hazards and problems so that appropriate control measures can be implemented. The HSP shall establish procedures and address emergencies that may arise during all site activities. Emergency vehicular access, evacuation procedures, and a listing of all contract personnel with phone numbers shall be included in the HSP.

The site-specific HSP shall describe the contractors procedures to enforce the plans elements and protocols within the site facility and boundaries at all times. The contractor's Health and Safety Officer shall identify the detailed, specific health and safety issues related to the process units and material handling areas within the facility and be responsible for enforcing the contractors HSP.

This Work Plan requires employees of the contractor and/or subcontractor to be certified to participate in abatement and environmental activities. Employee certifications will be kept on file in the contractor's project field office. The contractor shall meet at a minimum the employee environmental health, safety training, and biological evaluation minimum requirements listed in Table 2-1.

TABLE 2-1. WORKER HEALTH EVALUATIONS AND SAFETY REQUIREMENTS

Type	Required Health Evaluations and Safety Training	General Work Tasks
GROUP A	None	General Work Force -- Outside Facility
GROUP B	40 Hr – HAZWOPER - OSHA OSHA Lead, Arsenic, and Cadmium Standard Blood Lead Tests Full Physical Respirator Fit Test Site Specific Training	General Work Force --Within Facility All Workers Within Facility or at CAMU site
GROUP C	40 Hr – HAZWOPER-OSHA Blood Lead Tests OSHA Lead, Arsenic, and Cadmium Standard Full Physical Respirator Fit Test Site Specific Training Asbestos - 8 Hr Worker Awareness OSHA	Asbestos Abatement Workers

Workers participating in general work tasks outside of the Asarco East Helena Plant facility require no special health evaluation or safety training, as outlined under Group A in Table 2-1. Workers participating in any task within the Asarco East Helena Plant facility, including all CAMU Phase 2 Cell tasks, require the specified health evaluations and safetytraining, as outlined under Group B in Table 2-1. Workers conducting asbestos containing material (ACM) abatement activities shall require additional safety training, as outlined under Group C on Table 2-1. Table 2-2 lists the tasks that shall be performed during implementation of the 2009 Work Plan and the associated health evaluation and safety training. All personnel conducting work associated with a task shall meet the health and safety requirements for the specific task.

TABLE 2-2. HEALTH EVALUATION AND SAFETY REQUIREMENTS ASSOCIATED WITH 2009 WORK PLAN TASKS

Tasks for 2009 Work Plan	Required Health Evaluation and Safety Training
Mobilization and set-up field office and related facilities	Group A
Pre-Cleaning	Group B
Pre-Cleaning ACM Abatement	Group C
Cleaning	Group B
Historic Survey and Recordation	Group B
Demolition	Group B
Waste Hauling and Placement	Group B
Waste Sampling and Analysis	Group B
Final CAMU Cover System	Group B
Final Cleaning	Group B
Exposed Soil Sampling	Group B
Plug and Abandon Underground Utilities	Group B
Interim Capping	Group B
Demobilization and Contract Close-out (Within facility)	Group B
Demobilization and Contract Close-out (Outside facility)	Group A
Project Oversight	Group B

2.2 HAZARDOUS MATERIALS ABATEMENT PLAN (HMAP)

The contractor shall develop a site-specific Hazardous Materials Abatement Plan (HMAP) for review and approval by Asarco. The purpose of the HMAP shall be the protection of personnel and the environment on-site, as well as the general public and environment in adjacent properties and neighborhoods. The components of the HMAP shall include, at a minimum, a 1) asbestos containing material (ACM) abatement plan, 2) used oil and liquid management plan, 3) universal waste management plan, 4) non-PCB and PCB light ballast management plan, and 5) refrigerant (freon) management plan. The contractor's HMAP shall fully describe the manner in which these materials shall be managed to ensure a safe working environment for their employees and adhere to all state and federal regulations. The HMAP shall be enforced within site boundaries at all times.

2.2.1 Asbestos containing material (ACM) Abatement

Materials located within the facility considered for ACM abatement include, but are not limited to rope, tile, mastics, transite siding and panels, window putty, roofing materials, and metal panels. The licensed contractor shall perform the ACM abatement activities according to the procedures contained in the contractor's HMAP.

ACM abatement activities to be performed consist of the removal of ACM from affected building and structures. In 2007, Asarco contracted with IRS Environmental to conduct a site-wide ACM survey of the East Helena facility, a copy of which shall be provided to the contractor. Based on this survey and past ACM abatement actions, limited amounts of ACM remain within the facility. The abandoned breaking floor building is one of the structures in which ACM is known to be present. A map illustrating buildings that have been surveyed for ACM is included on Sheet 3 in Appendix B. This map and the IRS Environmental ACM survey shall be considered as a reference, only. The contractor shall be responsible for identifying and removing all ACM. Since an ACM survey has not been conducted on the all structures affected by this Work Plan (such as the acid dust loading building), the contractor shall perform the necessary supplemental ACM survey and, if applicable, perform ACM abatement activities. If, during the course of implementing the Work Plan, additional previously unknown ACM is discovered, the contractor shall utilize the methods and procedures as described in the HMAP for ACM management.

ACM subject for removal under the Work Plan that are judged by a competent person to be friable (i.e., ACM that, when dry, can be crushed, crumbled, pulverized, or otherwise rendered to a dust by hand pressure) shall be containerized in a manner to prevent release of ACM material. Non-friable asbestos materials, such as ACM transite siding, do not require special containerization.

The contractor shall assemble and submit the required notifications to the MDEQ before beginning ACM abatement work. The contractor shall copy Asarco with all submittals.

The contractor shall post and display danger signs meeting the specifications of OSHA Construction Safety Order, Section 1529 and WAC 296-62-077 at any locations and approaches where regulated areas are present. The signs shall be posted at a distance sufficiently far enough away from the work areas to permit any employee or visitor to read the sign and take the necessary protective measures to avoid exposure. The warning signs shall include, at a minimum, the following wording:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING
ARE REQUIRED IN THIS AREA

These warning signs shall be printed in letters of sufficient size to be clearly legible. In addition, two strips of red "DANGER ASBESTOS – DO NOT ENTER" tape shall be used to restrict access by untrained personnel.

The contractor shall be responsible for providing adequate power at each of the buildings where ACM abatement is being preformed. The contractor shall provide temporary lighting sources and ensure safe installations (including ground faulting) of temporary power sources and equipment by complying with all applicable electrical code requirements and OSHA requirements for temporary electrical systems.

The contractor shall ensure that ACM is transported to the CAMU Phase 2 Cell for disposal following the same procedures for waste transport as described in Section 8.0. ACM will be weighed by Asarco's engineering consultant prior to placement in the CAMU Phase 2 Cell. ACM will not be sampled or further characterized before being placed in the CAMU Phase 2 Cell. Asarco's engineering consultant will define the location where ACM are placed in the CAMU Phase 2 Cell and will survey and record this location.

2.2.2 Used Oil and Liquid Management

The contractor shall identify all equipment located within buildings and structures affected by the Work Plan that may contain used oils or other liquids. The contractor shall locate and coordinate the removal of all such oils and liquids prior to commencing any demolition. The contractor may utilize mechanical (metal or plastic) hand pumps or vacuum devices to facilitate oil and other liquid removal. Hand pumps, if used, shall pump the oil or other liquid directly into 55-gallon drums. Drums shall be located adjacent to the work area during oil or liquid transfer to reduce spillage. Once filled, the drum will be sealed and labeled (Section 7.3) with the type of substance. Absorbent shall be available on-site during oil and liquid removal and transfer as a contingency in case of spillage. Used absorbent shall be placed in a drum labeled "Oily Absorbent". The contractor shall promptly clean up oil and grease spills to prevent contamination of storm water and/or run-off. All storage containers shall be relocated by the contractor to the shop storage building. The contractor shall notify Asarco when such relocations take place. Asarco will be responsible for inspection and management of used oils and liquids once they are placed into storage. Asarco will manage used oils and liquids appropriately and, if hazardous, Asarco will manage this waste in accordance with applicable rules and regulations.

2.2.3 Universal Waste (UW) Management

Universal Waste (UW) items shall require special handling and management. UW items that may be encountered during the implementation of the Work Plan include lamps and mercury containing equipment. UW lamps include fluorescent, high intensity discharge, neon, mercury vapor, high-pressure sodium, and metal halide lamps. UW mercury containing equipment includes thermostats that contain metallic mercury in an enclosed ampule. The contractor shall identify all UW lamps within or around the buildings and structures affected by the Work Plan. The contractor shall locate and coordinate the removal of all such lamps prior to commencing any demolition. The contractor shall ensure that all electrical systems have been de-energized before personnel begin removal of the UW lamps. The plastic cover of the light fixture, if present, will be removed and placed on a secure surface, at which time the exposed UW lamps will be removed by hand and placed in an appropriate container for

storage. The contractor may utilize rolling scaffolding, man lifts, or ladders to support workers on single story floors. For ceilings or outside locations that are of greater height, a motorized boom-lift may be utilized to assist in retrieving UW lamps and other lighting components.

The contractor shall identify all UW mercury containing equipment within or around the buildings and structures affected by the Work Plan. The contractor shall locate and coordinate the removal of all such mercury containing equipment prior to commencing any demolition. Each identified piece of mercury containing equipment designated for removal will be isolated and cleared of all obstructions. Disconnection of the isolated items will proceed utilizing all safety and standard removal procedures for the specific item. Procedures will include lockout/tagout of electrical feed to buildings or areas, cutting electrical lines to the unit, and removing isolated items. The removed mercury containing equipment shall be placed in a 5-gallon spill proof plastic container containing several inches of absorbent media. This media will cushion the ampules during facility transportation as well as absorb any free-flowing mercury if ampules were to break or leak. In case of a spill or release, contractor personnel involved in the removal and handling of mercury containing equipment shall utilize a Mercury Spill Response Kit. All storage containers shall be relocated to a designated temporary storage area. Asarco shall be notified when such relocations take place. The contractor should anticipate using the shop storage building for the storage of mercury containing equipment. Asarco will be responsible for inspection and management of UW placed into storage.

2.2.4 Non-PCB and PCB Light Ballasts Management

The contractor shall be responsible for identifying and removal of non-PCB and PCB light ballasts prior to commencing demolition. After removal of fluorescent light tubes, the protective ballast cover shall be removed to access the light ballast. The light ballast inspection may be completed with the fixture in place. The inspection of the light ballast shall include careful review of the ballast label to determine if the ballast contains PCBs. If the ballast is not marked "No PCBs" or the label is removed or unreadable, the ballast shall

be assumed to contain PCBs. If the ballast does not contain PCBs, as determined by this definitive visual inspection, the non-PCB ballast will be left in place for demolition.

During removal of the ballast, if any portion of the light fixture is impacted with PCB oil, the portion of the impacted fixture may be decontaminated by scraping the oil from the ballast cover. Any generated residue or wiping clothes will be considered PCB contaminated and incorporated into the drummed ballast waste stream. All PCB storage containers shall be relocated to a designated temporary storage area. Asarco shall be notified when such relocations take place. The contractor should anticipate using the shop storage building for the storage of mercury containing equipment. Asarco will be responsible for inspection and management of the PCB items placed into storage.

2.2.5 Refrigerant (Freon) Management

Under the 2007 Cleaning and Demolition Work Plan, air conditioning Freon from heating and cooling units within the inactive buildings and structures at the East Helena facility was removed. These heating and cooling units have been marked with a painted yellow stripe. The contractor shall be responsible for identifying and removal of any Freon from remaining building and structures prior to commencing demolition. The Freon containing equipment shall be disconnected utilizing the proper safety and standard removal procedures and evacuated. Air conditioners and chillers shall be disconnected from their power sources. The contractor shall utilize a certified refrigerant recovery subcontractor to facilitate evacuation and recovery of the refrigerant. The contractor shall document on an internal removal log, the quantity in pounds of Freon recovered from the various units. Asarco shall be provided with a copy of the log. Once the unit is cleared, the unit shall will be tagged with an agreed upon colored tag indicating "Freon Removed." The contractor will be responsible for arranging for the recycling of the removed Freon.

2.3 RECYCLABLE MATERIAL PLAN (RMP)

During the demolition phase of the Work Plan, the contractor will likely encounter certain materials or equipment (scrap steel, copper, motors, pumps…) that may be recycled. Asarco

encourages the recycling and recovery of these valuable material assets. The contractor shall develop a Recycling Material Plan (RMP) for review and approval by Asarco. The plan shall include a description of the types of recycle material that the contractor considers valuable. The techniques for segregating recyclable material from waste (including decontamination procedures), manner for transporting to the recycling facility, tracking of recyclable material, and inspection procedures shall be included in the RMP. The contractor shall establish recyclable material staging and loading areas. These areas shall be easily accessible to expedite loading and transport activities. Surface cover in these areas shall be durable enough to withstand the storage and movement of heavy scrap material without breaking apart and creating difficulties when loading the material or impacting the areas. The contractor shall provide records to Asarco that indicate the manner in which recyclable material is managed, handled, or treated for recovery or recycling that demonstrates it's value. The contractor shall submit 1) acceptance criteria required by the receiving facility (expressed as a minimum threshold of recoverable metals and maximum allowable toxic metals), 2) a demonstration that the receiving facility is in compliance with all applicable environmental requirements, 3) a copy of the contractual agreement between Asarco, its broker and the receiving facility, and 4) the name of the state or provincial regulatory contact and facility contact.

2.4 DUST CONTROL PLAN (DCP)

The contractor shall develop a Dust Control Plan (DCP) for review and approval by Asarco. The general requirements of this plan shall be to provide adequate resources to control dust and to detail the means and methods that shall be utilized to implement dust control measures during Work Plan activities. The contractor's dust control measures shall be designed to control the emission of visible fugitive nuisance dust. These controls shall be accomplished through the use of administrative, engineering, and physical controls that shall include, but not be limited to:

- Moistening surfaces with water,
- Applying dust suppressants or encapsulates, where applicable,

- Minimizing soil, road, and surface disturbances,
- Minimizing dust exposure periods and wind erosion before dust-abatement measures are applied,
- Utilizing a vacuum sweeper to remove road dust spillage,
- Curtailing of work activities during high wind conditions (over 15 MPH average hourly rate),
- Controlling vehicle and equipment speeds (10 MPH maximum),
- Restricting traffic to designated roads and corridors, and
- Selecting appropriate equipment.

The contractor shall utilize an overall dust control application program that shall include, but not limited to:

- Providing dust suppression (water) before, during, and after demolition of a structure,
- Moistening the targeted drop area prior to the demolition of the structure,
- Installing protective barriers to minimize debris shrapnel during demolition of structures,
- Providing dust control during material sizing and loading operations,
- Controlling material drop heights during loading, unloading and material transfer operations,
- Minimizing and controlling material handling operations,
- Controlling on-site vehicular traffic and performing haul road maintenance, and
- Applying other approved methods for control of dust during specific procedures.

The contractor shall consider the mitigation of airborne dust generation a priority. Throughout the project, the contractor shall execute all necessary steps to effectively control dust in the working area during Work Plan activities. Asarco reserves the right to stop all work if Asarco personnel or the Asarco engineering consultant believe the contractor is not meeting the obligations of their DCP. The contractor shall remove at ground level and at all accessible areas all gross debris accumulation that could be a source of airborne dust. Prior

to demolition, the contractor shall institute a program of pre-wetting and moistening building interiors and horizontal surfaces where dust has accumulated. This pre-wetting of the structure interiors will minimize remaining dust from becoming airborne during the demolition process. Dust that may fall to the ground shall be gathered, containerized, and properly managed.

The contractor shall utilize water trucks, misting systems, and all other appropriate equipment (i.e. manlifts) to keep debris moist during the demolition and loading process. The DCP shall outline the dust control measures during stack demolition, including the prohibition of stack demolition if wind conditions exceed 5 mph. All transport vehicles shall be limited to a maximum 10 miles per hour while both on-site and during transport. Limiting speeds shall prevent dust from become airborne during transport and shall reduce the kick-up of dust from rolling tire action.

The contractor shall ensure that transport of waste on-site occurs on prescribed paths, which will be determined during the course of demolition. The changing nature of the site as demolition of structures progress may dictate the modifications of haul routes. Once defined, these haul routes shall be enforced to create dedicated routes that can be maintained to mitigate dust and debris migration and prevent any potential spread of contamination. The contractor shall be responsible for maintenance of haul routes through routine daily inspection to ensure that debris is not being released. The Contractor shall promptly address all deviations encountered during daily inspections.

The contractor shall lightly dampen haul routes with a water truck on a frequency to prevent the generation of dust. The facility's air quality permit requires the use of dust suppression methods, including the use of water, to meet this obligation. The use of water as a dust suppression shall be managed to minimize infiltration. The temperatures and relative humidity experienced during the construction season will promote evaporation of the water used for dust suppression rather than infiltration. Street sweepers or a vacuum truck shall be used on plant site and waste transport haul roads. Water dust suppression can augment the

constant use of street sweepers or vacuum trucks. The contractor shall utilize the services of a street sweeper to clean the haul routes of accumulated debris and dust. This debris and dust sweepings will be hauled to the CAMU Phase 2 Cell.

Haul roads within the plant site and haul roads used for waste transport will need to be kept clean at all times. A street sweeper designated to cleaning roads and surfaces within the plant site will clean all loose dust in order to minimize the chances for the off-site migration of dust and debris. This street sweeper will not be used off site of the plant. A second street sweeper designated to keeping CAMU Phase 2 Cell haul roads clean will be run constantly when waste is being hauled. Haul roads at the CAMU Phase 2 Cell have been paved so that waste and debris can easily be cleaned. In addition, the contractor shall place and maintain large gravel on a section of the haul route at the plant exit and CAMU exit to remove loose dust and debris from haul truck tires. Once hauling of waste is complete, the contractor will place this gravel material in the CAMU Phase 2 Cell. The DCP shall also address a plan for the application of a dust suppressant or binder on waste in the CAMU Phase 2 Cell. The application of a dust suppressant or binder may be necessary if fugitive dust emissions from the CAMU Phase 2 Cell occur, or the CAMU Phase 2 Cell is left open for an extended period of time due to construction or demolition delays.

The DCP shall indicate that the existing Asarco provided fill station, adjacent to Upper Lake, be utilized as the main source of non-potable water for dust suppression operations. The fill station water source used for dust suppression is Upper Lake.

The contractor project staff (i.e., project superintendent, foremen, H&SP) shall inspect work areas daily to assess the need for implementation (or additional implementation) of dust control measures. The contractor shall include inspection procedures and recordation within the DCP.

2.5 STACK DEMOLITION PLAN (SDP)

The contractor shall develop a Stack Demolition Plan (SDP) for review and approval by Asarco. Asarco will submit an approved copy of the SDP to the MDEQ and EPA for their records prior to commencement of cleaning and demolition activities. The SDP shall describe the means and methods for demolition of the blast furnace, sinter plant, acid plant, and concentrate storage and handling building stacks. The SDP shall include stack demolition procedures and protocol, worker and public health and safety measures, and actions that shall be taken to control the emission of dust, as further detailed in the DCP. The contractor shall be responsible for coordination of stack demolition activities with other Asarco contractors, the Asarco engineering consultant, and the Federal Aviation Administration (FAA).

The SDP shall ensure that all demolition debris is contained within the Asarco East Helena facility. No stack debris, regardless of size, shall cross the fence line or the boundary into Upper Lake or Lower Lake. The SDP shall contain protocol to protect existing structures, existing wells, and the existing interim temporary cover system.

The SDP shall contain provisions for conducting a pre-blast survey by an independent firm hired by the contractor to verify that the surrounding structures are not affected by the demolition (blast) activities. Seismographs shall be placed at various locations surrounding the blast site to verify that blast vibration does not exceed prescribed values. The estimated peak particle velocity should be less than 0.25 inches/ second at a 500-foot radius from the stacks. The initiation system shall be a non-electric system to provide a higher factor of safety and eliminate premature detonation by lightning or radio interference.

The contractor shall establish a secure area around the site. All site security shall be coordinated between Asarco, the contractor, and the local authorities. The SDP and Community Relations Plan (Section 2.6) shall identify all lines of communication between local authorities and the contractor prior to stack demolition.

2.6 COMMUNITY RELATIONS PLAN (CRP)

The contractor shall develop a Community Relations Plan (CRP) for review and approval by Asarco. Asarco will submit an approved copy of the CRP to the MDEQ and EPA for their records prior to commencement of cleaning and demolition activities. At a minimum, the CRP shall specify the manner for notifying, communicating, and securing the site with Asarco, MDEQ, EPA, local law enforcement authorities, the city of East Helena, Lewis and Clark County, media, and the local community throughout demolition activities.

2.7 NESHAP PERMIT

The contractor shall obtain the applicable National Emissions Standard for Hazardous Air Pollutants (NESHAP) Permit. This permit is required for both asbestos abatement activities and demolition activities. The contractor shall communicate directly with the MDEQ to obtain the permit and shall present the executed permit to Asarco prior to mobilization. Asarco recommends that the contractor promptly work with the MDEQ to ensure that the Asbestos NESHAP notification is complete and an asbestos project permit is acquired in a timely manner so as not to delay the demolition and clean-up schedule.

2.8 CONSTRUCTION SCHEDULE

The contractor shall prepare a detailed construction schedule that includes, at a minimum, durations and milestones for Work Plan activities. The schedule shall provide sufficient detail to define the path of the project and include time for delays from inclement weather. Throughout the project, the schedule shall be regularly updated to reflect current conditions. The contractor will provide all schedules to Asarco, the MDEQ, and EPA.

2.9 STORM WATER CONTAINMENT, RUN-OFF PATTERNS, AND WATER MANAGEMENT

The contractor should rely upon the Asarco East Helena facility's existing Storm Water Prevention Plan (SWPPP) for this scope of work. This SWPPP describes storm water prevention procedures to be utilized during the Work Plan. In general, facility storm water runoff is routed to the internal plant water handling system. Storm water and run-off will be

directed to the High Density Sludge (HDS) water treatment facility (WTF) to be operated by Asarco personnel. The contractor will be responsible for the separation of solids and liquids from all water used by the contractor during the implementation of this Work Plan. The contractor will need to remove solids from water reporting to the WTF, dry solids, and place dry solids in the CAMU Phase 2 Cell.

In areas where cleaning and/or demolition could potentially create runoff, the contractor shall protect the drains as necessary to prevent contaminants from entering the system. This protection shall consist of a combination of sand bags, hay bales, and filter fabric strategically placed to remove the solids while allowing the storm water and/or run-off to continue to the existing storm water containment and treatment system. The contractor shall ensure storm water and run-off is free of grease and oils by utilizing methods to prevent and promptly clean any oil and grease spills. The contractor will be responsible for ensuring that the existing storm water containment and treatment system is not impaired and in proper working order upon completion of Work Plan activities.

The contractor shall utilize Best Management Practices (BMPs) throughout the Work Plan implementation. From the existing SWPPP, applicable information, such as management practices for the hazardous material storage areas, shall be incorporated into the contractor's Best Management Practices. Other material handling practices related specifically to the decontamination and demolition activities shall be addressed. Management practices for cross-contamination control shall be addressed, such as avoiding spills from construction vehicles during hauling, loading, servicing, and fueling and controlling contaminated soil erosion. Any changes to the storm drainage system due to demolition will be addressed as the structures are demolished and the site conditions change.

Standard erosion control measures shall be utilized, including controlling dust, providing straw bales around storm drain inlets, placing sand-bags at critical perimeter locations, and avoiding off-site tracking of debris from vehicles. Provisions to avoid ponding and maintain excavations free of storm water runoff shall be addressed. Typically, this will involve filling

these locations prior to storms. Measures for erosion control shall be added as the project progresses.

The contractor shall perform inspection of the erosion control measures prior to, during, and after storms to evaluate the adequacy of these measures and to manage corrections as necessary. Documentation of the inspection and correction activities shall be maintained, as required. Generally, the contractor's project manager or engineer shall perform the inspection and documentation. Copies of the documentation shall be forwarded to Asarco for review and record retention.

Existing collection trenches and sumps shall be used to collect surface water during Work Plan implementation. The locations of these trenches and sumps will be confirmed and identified by the contractor, utilizing existing project utility plans and plant engineering drawings, during the pre-mobilization activities as well as throughout the completion of Work Plan. During collection of surface water, water will be directed to Asarco's WTF for treatment. Asarco shall manage all collected surface water run-off in the WTF. Asarco shall be responsible for any required water treatment, waste management, and disposal permits associated with the WTF. The contractor shall be responsible for maintaining and cleaning existing storm water collection trenches and sumps.

The conveyance systems used to collect project decontamination water will include, but not limited to those features generally located in the vicinity of Asarco's wastewater treatment and the on-site car wash facilities. The East Helena Plant WTF treats facility water and discharges the treated water under Asarco's MPDES permit. The sludges that collect in sumps, defined as wastewater treatment units (40 CFR 260.10), are exempt from RCRA permitting. When generated by removal from the sumps, the sludges will be managed appropriately and, if hazardous, will be managed in accordance with applicable rules and regulations.

Asarco's current MPDES permit, March 2001 MPDES permit renewal application, and April 2007 update to its March 2001 MPDES permit renewal application (MDEQ action pending) list Upper Lake and City of East Helena water as operations contributing flow to Asarco's WTF effluent, both of which may be used for decontamination of project equipment. The MPDES permit allowed for the treatment of decontamination equipment wash water during plant operations. The MPDES permit provides for this same treatment during the cleaning and demolition activities.

2.10 SITE SECURITY

The contractor shall establish a site security plan for review and approval by Asarco. The contractor shall be responsible for all facets of site security during implementation of the Work Plan. The facility is currently surrounded by security fencing or structures, which will prevent unauthorized personnel access to the site. The contractor shall establish work hours in consultation with Asarco. The contractor shall follow sign-in procedures and check in at the main facility gate or another gate/entrance specified. The contractor shall control access to work areas during operating hours through the monitoring of a single ingress/egress location with mandatory sign-in procedures for all contractor personnel. During off-hours, sensitive work areas (open ditches, channels, and holes) shall be cordoned off with temporary barricades, delineators and caution tape. The contractor shall coordinate with community leaders, local authorities, law enforcement officials, and private owners to restrict public access to the facility during all phases of the Work Plan. The contractor may be required to close public right-of ways, county roads, and rail corridors; establish exclusion zones; and control public and media viewing.

2.11 ADMINISTRATIVE, STAGING, AND DECONTAMINATION FACILITIES

The contractor shall establish and utilize temporary facilities and construction control procedures throughout the Work Plan. Asarco will make available, and the contractor will maintain, temporary office space to coordinate field construction activities. The contractor shall provide adequate sanitary facilities, fences, barricades and scaffolding. Storage for tools, light equipment and appropriate signs shall be established, as needed, for this project.

Temporary services shall be coordinated with Asarco for Work Plan activities and site traffic. Safety shall be managed, including the monitoring of vehicular and pedestrian traffic and public safety, as needed.

The contractor shall establish work zones during pre-mobilization planning. In general, this planning shall include:

- Lead and decontamination exclusion areas,
- ACM removal areas,
- Equipment staging areas,
- Personnel decontamination areas,
- Storage areas,
- Demolition and material salvage areas,
- Loading areas and staging of off-site waste, and
- Field office and support areas.

2.12 GENERAL CONSTRUCTION PERMITTING

The following list identifies the applicable permits and/or notification that may be obtained or the agencies that may need to be notified by the contractor prior to the initiation of any fieldwork.

- Montana Department of Environmental Quality (MDEQ).
- Environmental Protection Agency (EPA).
- Division of Occupational Safety and Health (OSHA) Department of Industrial Relations - Notification of Asbestos Abatement.
- Division of Occupational Safety and Health (OSHA) Department of Industrial Relations - Notification of Demolition Activity S-691.
- Montana Rail Link.
- Lewis and Clark County Sheriff.
- City of East Helena Police Department.
- Montana Highway Patrol.

2.13 PRE-CONSTRUCTION MEETING

Following the completion of the pre-construction contractor tasks outlined above, a pre-construction meeting shall be held at the facility or other location designated by Asarco. The purpose of the meeting will be to discuss the scope of work and the roles of the parties involved. Details regarding the date that fieldwork will be initiated, site access requirements, hours of operation, deliverables required by Asarco, and locations of construction equipment, staging and cleaning areas should be discussed. Participants in the meeting shall include the Asarco project team, Asarco's engineering consultant project team, the contractor's project team, the MDEQ, and EPA.

2.14 MOBILIZATION

Following the pre-construction meeting, work areas shall be secured and a central field office shall be established. Equipment and materials necessary to complete the project shall be moved to the facility and staged at predetermined locations within the facility. In addition to the field office, the following work areas shall be established:

- Establishment of on-site electric and water service (as needed),
- Personnel decontamination areas,
- Temporary conveyance systems,
- Equipment lay down areas, and
- Demolition salvage staging and loading areas.

The contractor shall establish personnel decontamination areas for each exclusion zone and work activities that may expose workers to unique safety hazards and/or hazardous levels of chemicals and waste materials. These requirements shall be used to determine appropriate personnel protective equipment (PPE) that will be used in each of the separate plant areas during each phase of work. Required PPE, decontamination procedures, and personnel decontamination equipment shall be identified in the contractors HSP and HMAP.

3.0 HISTORIC SURVEY AND RECORDATION

Asarco shall contract an engineering consultant to conduct historic recordation of the demolition structures and buildings identified in the Work Plan. The proposed demolition focuses twelve structures with associated features anticipated to be impacted by the project. The cleaning of specific structures or building features (such as baghouse bags or pump house equipment removal) will proceed following consultation with the Montana State Historic Preservation Officer and notice to proceed is received by MDEQ and EPA. In addition, no demolition activities will commence on structures listed in the section until the photographic documentation is complete and notice to proceed is received by MDEQ and EPA. In conjunction with EPA, the Montana State Historic Preservation Office (SHPO), and MDEQ, Asarco's engineering consultant shall define the requirements for historic recordation of the twelve structures and associated features. These obligations are:

- Provide a plan map of the facility indicating photograph numbers, photograph locations, and cardinal directions of each photograph taken.
- Provide photographs and a photographic log of each structure.
- Provide drawings and plans for each structure.
- Provide video documentation of the demolition of the three stacks.
- Provide a context narrative,.
- Provide Cultural Resources Information System (CRIS) Forms.
- Provide archival quality 5 by 7 inch prints and photograph log of each structure.

The structures identified for cleaning and demolition during 2009 include:

1. Sample mill,
2. Crushing mill and associated baghouses,
3. Hopto pad, storage bins, and conveyor gallery,
4. Sinter stockpile building,
5. Highline railroad,
6. Groundwater sump,
7. Abandoned and new breaking floors,
8. Acid dust facility,
9. CSHB ventilation system and stack,
10. Sinter plant stack,
11. Acid plant stack, and
12. Blast furnace stack.

3.1 PLAN MAP

A plan map of the facility will be created using Asarco's engineering drawing 08-01-7806. Building names will be cross-referenced to the demolition plan map. Based on discussions with personnel from the State Historic Preservation Office during the work performed in 2008, all buildings will be recorded and photographed. There will be no effort to separate the recordation approach based on the age of the structure.

3.2 PHOTOGRAPHIC DOCUMENTATION

National Register format coding information for the photo record shall be utilized to document each photo number, the location where the photo was taken, and the direction of photo. At least one (1) representative photograph shall be taken of each target building. Older buildings and buildings with potential architectural significance (because of uniqueness of design or function) shall have additional photos taken. The number of photographs shall be adjusted to capture the building's integrity of design and function to assess significance. The photo log shall provide the specifics of each shot and shall include the orientation of the

photograph, field notes taken during the photography effort, and other details regarding each photograph.

3.3 VIDEOGRAPHIC DOCUMENTATION

To comply with SHPO's requirement that the demolition of the sinter plant stack, acid plant stack, and blast furnace stack be videotaped, Asarco proposes to develop a professionally produced documentary of these historic events. The approximately 10-minute-long program shall provide a brief history of the smelter, as well as subsequent events culminating in the demolition itself. After establishing the context, most of the film shall focus on the preparations for an event that will inevitably be of interest not only to industrial historians and regulatory officials, but to the local community and the entire state of Montana. The documentation anticipates interviews with state and local officials, along with the demolition contractors, who shall describe the technical details of the demolition. These would include the overall plan for the demolition, how the charges are laid in order to control the collapse of the stacks, and other pertinent details. The interviews shall be accompanied by carefully interwoven shots of workers making the preparations to ensure that the stacks come down exactly as planned. The documentary team shall work closely with the demolition contractor so that the entire process, from planning to implosion, is shot from the best angles to present these historic events from the best possible vantage points. The finished documentary shall be presented on high quality DVD for archival preservation. The actual tape plus two DVDs shall be submitted to SHPO. A DVD will be provided to both the MDEQ and to EPA.

3.4 DRAWINGS AND PLANS

The search for engineering drawings shall include a search of records currently maintained in the East Helena Smelter Engineering Office, and/or corporate headquarters and/or storage facilities in Arizona. All engineering drawings and plans shall be electronically scanned and provided to SHPO. A spreadsheet of drawing titles and jpg delineators shall be developed as an index to the scanned documents.

3.5 CONTEXT NARRATIVE

The 2009 context narrative may include an examination of documents warehoused. The narrative shall discuss Asarco's importance and the importance of the smelter on a local and regional scale. In addition, oral histories of smelter workers archived at the Montana Historical Society shall be reviewed to provide additional personal context to the corporate narrative.

3.6 CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORMS

CRIS forms provide input for the State Historic Preservation Office Geographic Information System that enables researchers to quickly determine if any significant cultural resources are recorded within a specific project area. CRIS forms shall be completed for every significant structure. A legends map shall be prepared to correlate the information on the CRIS forms and the photographic record to assist future researchers to correlate the data.

3.7 ARCHIVAL QUALITY 5 BY 7 INCH PRINTS AND PHOTOGRAPH LOG OF EACH STRUCTURE

Photos shall be 5 by 7 inch acid free black-and-white prints presented in acid free photo pages in three ring binders. Each photo shall be identified using the National Register photo coding system. One Smithsonian number has been established for the entire facility. Electronic copies of all photographs will also be archived. All documentation shall be noted on each photo as required.

3.8 DELIVERABLES

The list of deliverables to be submitted for work performed in 2009 includes:

1. Plan Map of the Facility,
2. Photorecordation and Photo Log,
3. Drawings and Plans with index of drawings,
4. Cultural Resources Information System (CRIS) Forms with legends correlation map,

5. Videographic tape and DVDs,

6. Context Narrative, and

7. Final Report.

These deliverables will be submitted to SHPO for final approval. EPA will issue Asarco an approval letter releasing these buildings and structures for demolition.

4.0 PRE-CLEANING

The contractor shall be responsible for identifying and conducting pre-cleaning activities on all building and structures identified in the Work Plan, with the exception of the high grade building, truck scale, pump house, direct smelt building, coverall buildings, adobe shed, and concentrate storage and handling building. Pre-cleaning of these structures will not be necessary since they will continue to be utilized following Work Plan implementation. The contractor shall utilize the controls and guidance set forth in the contractor's HSP and HMAP. The pre-cleaning procedures that the contractor shall employ must address, at a minimum, management of ACM, used oils and liquids, universal wastes (UW), non-PCB and PCB light ballasts, and refrigerants from those structures and buildings identified in the Work Plan. FAA regulated lights located on the three stacks are considered a UW and will need to be removed prior to demolition. The pre-cleaning and off-site management of oils and other liquids from buildings and structures is necessary since the CAMU Phase 2 Cell cannot accept free liquids. Oils, universal wastes, and PCB articles removed from all buildings and structures identified in this Work Plan may be stored in the shop storage building. Asarco will be responsible for inspection and proper management of these materials placed inside the shop storage building. ACM shall be transported to the CAMU Phase 2 Cell. The pre-cleaning activities may commence prior to conducting the historic survey and recordation phase of the Work Plan.

5.0 CLEANING

The contractor is responsible for conducting all facets of the cleaning process. In most cases, the building and structures identified in the Work Plan have been utilized to store process material. The intent of the cleaning task prescribed in the Work Plan is twofold. First, the cleaning of building and structures that will not be demolished shall eliminate the presence of process material. The removal of hazardous waste from these building and structures will be deemed complete when no process materials are visible, as determined by MDEQ representatives. Second, the cleaning of buildings and structures scheduled for demolition shall reduce the potential for fugitive emissions during demolition activities. The contractor shall implement all necessary precautions, which shall be addressed in the contractor's HSP and DCP when working with and handling process material. The buildings and structures identified for cleaning are delineated on Sheet 4 and Sheet 5 in Appendix B. The cleaning activities may commence prior to conducting the historic survey and recordation phase of the Work Plan providing that these activities do not compromise the building or structure integrity. However, the cleaning of specific structures and building features (such as baghouse bags and pump house equipment removal) will proceed following consultation with the Montana State Historic Preservation Officer and notice to proceed is received by MDEQ and EPA.

5.1 CLEANING OF BUILDINGS AND STRUCTURES NOT SCHEDULED FOR DEMOLITION

The cleaning of buildings and structures not scheduled for demolition are shown on Sheet 4 in Appendix B. The cleaning of buildings and structures that will not be demolished shall consist of:

- Prepare identified work areas,
- Conduct initial, dry removal of bulk solids,
- Remove bulk materials,
- Conduct vacuum cleaning,

- Place vacuum solids in sealed containers,
- Haul all containers to CAMU Phase 2 Cell,
- Wash down identified work area,
- Manage wash down water within identified work area, and
- Haul dried solids to CAMU Phase 2 Cell.

Work area preparation will consist of delineating a work area that can be both easily contained and is considered a cohesive area unit. Once the work area has been defined, the contractor shall begin the removal of initial, bulk solids. The goal of this task will be to remove the gross, dry accumulation of process material at all areas within the identified structure or building. In certain structures and buildings, the contractor should anticipate using chipping, grinding, and jack hammering equipment to remove hardened, adhered, or fused materials. The bulk material collected using these techniques shall be placed into haul trucks, weighed, sampled, and transported to the CAMU Phase 2 Cell. An industrial vacuum system equipped with HEPA filtration shall augment the dry removal of process material. Material collected using the vacuuming procedures and removed baghouse bags shall be loaded via airtight chute into appropriate containers (i.e., double 6-mil mega bags, etc.), weighed, and hauled to the CAMU Phase 2 Cell. The contractor will be responsible for coordination of these activates with the Asarco engineering consultant.

The buildings and structures not scheduled for demolition shall require supplemental cleaning using low-volume, high-pressure washers. Upon completion of the gross process material removal and vacuuming of floors, walls, ceilings, and tank interiors, the contractor shall pressure wash all interior surfaces using low-volume, high-pressure washers. The contractor shall be responsible for removing all process material and cleaning these structures to the satisfaction of Asarco and MDEQ to ensure that no process material is visible. The contractor shall control the use and contain the presence of wash down water to the building, structure, or tank interior. The contractor shall augment the evaporation or absorption of wash down water and enhance the separation of solids to minimize their impact to Asarco's WTF. Any tank cleaning water or excess water not evaporated or absorbed shall be collected

by the contractor (i.e. by vacuum) and routed to Asarco's WTF. Excess water shall not be allowed to stand for lengthy periods of time and must be completely collected by the contractor by the end of each workday. Water will not be allowed to collect in areas where there are obvious cracks in concrete or other pathways to soil. The specific cleaning procedures for building, structures, and tanks that are not scheduled for demolition is discussed below.

5.1.1 Hydrogen Peroxide Tanks

Two aluminum tanks, each having the capacity of 13,000 gallons, were used to store 50 percent hydrogen peroxide. The last of the hydrogen peroxide was drained from these tanks in July 2007. Bulk solids removal within these storage tanks will not be necessary. The contractor shall wash the interior of these tanks using a low-volume, high-pressure washer.

5.1.2 High-Grade Building

The high-grade building stored and processed high-grade material (containing appreciable amounts of precious metals) within a secured and gated facility. The high-grade material generally arrived in sealed containers or drums. The contractor shall anticipate minimal bulk solids removal from this building. The contractor shall vacuum clean the interior and surrounding area of the high-grade building to remove all visible process material. Once all bulk solids are removed and the entire interior of the building is vacuum cleaned, the contractor shall wash the interior (ceiling, walls, floor) of the building using a low-volume, high-pressure washer.

5.1.3 Truck Scale

The truck scale continues to be used to weigh incoming material that enters the facility and outgoing material that leaves the facility. The contractor shall anticipate nominal bulk solids removal from under the scale. The contractor shall vacuum clean the areas under and surrounding the truck scale to remove all visible process material. Once all bulk solids are removed and the entire area is vacuum cleaned, the contractor shall wash the surrounding

area using a low-volume, high-pressure washer. To maximize cleaning efforts, the contractor shall schedule the cleaning of the truck scale near the end of the Work Plan activities.

5.1.4 Locomotive Crane Shed

The locomotive crane shed garaged the diesel electric crane and was used sparingly to store containerized process material. Bulk process material was not stored within the crane shed. Lime rock was placed around the exterior of this building to act as a run-on diversion berm. This building may have a partial dirt floor. The contractor shall remove all lime rock around the exterior of the building. The contractor shall remove the lime rock fill from the maintenance pits. The contractor shall remove all debris inside and surrounding the building and vacuum clean the interior of the building's floor, walls, and ceiling to remove all visible material. Once all bulk solids are removed and the entire area is vacuum cleaned, the contractor shall wash the building interior using a low-volume, high-pressure washer. The RPE liner material located inside the building shall be sized to be no greater than 6ft by 6ft sheets before being placed in the CAMU Phase 2 Cell. The contractor will place sized RPE material in the CAMU Phase 2 Cell at the direction of Asarco's engineering consultant.

5.1.5 Cement and Dust Silos and Coke Hopper

The two enclosed silos were used to store cement and baghouse dust prior to these materials being placed into mixing agglomerators and the coke hopper was used to feed the previously demolished coke transfer belt. The silos and coke hopper have been previously cleaned so the contractor shall anticipate minimal bulk solids removal from these structures and the surrounding area. Small bin ventilation baghouses are located on the top of each silo. The contractor shall remove all bags from the baghouses and vacuum clean the baghouse interiors. The contractor shall wash the interior of the baghouses, silos, and coke hopper using a low-volume, high-pressure washer.

5.1.6 Soda Ash and Lime Silo

The enclosed silos stored soda ash and lime, which were once used as reagents in the Asarco's WTF. A small bin ventilation baghouses are located on the top of the silos. The

contractor shall remove all bags from the baghouse and vacuum clean the baghouse and silo interior as well as the surrounding area. The contractor shall wash the interior of the baghouses and silos using a low-volume, high-pressure washer.

5.1.7 Pump House

The pump house contains pumps that previously provided water for 1) fire protection and process usage at the facility and 2) the closed circuit blast furnace cooling system. The building also contains an electrical storage room and an empty diesel tank. The contractor will remove all debris in and around the building, vacuum clean the interior of the building's floor, walls, and ceiling, and relocate the diesel tank to an area specified by Asarco for re-use. The contractor shall wash the interior of the pump house using a low-volume, high-pressure washer. The contractor shall be careful not to damage the water transfer line entering and exiting the building.

5.1.8 Storm Water Sump

The active sump collects storm water and routes it through an underground line to Thornock tank. The contractor will remove the lid on the sump and vacuum clean the interior of the sump to remove all sludge and clean the area surrounding the sump. Removed sludge is not eligible for the CAMU. The contractor shall dry the sludge removed from the storm water sump. Asarco will manage the sludge removed from the sump appropriately, and, if hazardous, will be managed in accordance with applicable rules and regulations. The contractor will replace the lid on the sump, as it is still in use. The contractor shall be careful not to damage the water transfer line entering and exiting the sump.

5.1.9 Direct Smelt Building

The Direct Smelt Building (DSB) stored material that was designated for processing within the now demolished blast furnace. Recently, the DSB accumulated ACM prior to placement in the CAMU Phase 2 Cell. The contractor shall anticipate significant bulk solids and adhered material removal from this building, particularly behind the bins walls and along support beams. The contractor shall remove bulk solids and vacuum clean the interior and

surrounding exterior of the DSB. This task shall include vacuuming process material from the interior of bins, from behind bin walls, and from the area surrounding the building. Once all bulk solids are removed and the entire interior of the building has been vacuum cleaned, the contractor shall wash the interior's ceiling, walls, beams, and floor using a low-volume, high-pressure washer.

5.1.10 Coverall Buildings

The two Coverall buildings were used to store process material prior to the material being directed to the smelting operation. Recently, the Coverall buildings accumulated hazardous wastes prior to the waste being placed in the CAMU Phase 2 Cell. In 2007, the interior floors of the buildings were washed down. The contractor shall dismantle the cement barriers (lego blocks) walls that line the inside of the coverall buildings. The individual lego blocks shall be cleaned using a low-volume, high-pressure washer. The cleaned cement barriers may be stored on the concrete pad west of the coverall buildings. Sheet 4 in Appendix B identifies the outside location where clean cement barriers may be placed. Upon removal and cleaning of all cement barriers from these buildings, the contractor shall vacuum process material from the interior and from the area surrounding the building. The contractor shall wash the building interior floors, walls, ceiling, and support structures using a low-volume, high-pressure washer.

5.1.11 Adobe Shed

The adobe shed was used to manufacture and store adobe block for use at the blast furnace area. The contractor shall anticipate minimal bulk solids removal from this building. The contractor shall remove bulk solids and vacuum clean the interior and area surrounding the adobe shed. Once all bulk solids are removed and the entire interior of the building is vacuum cleaned, the contractor shall wash the interior (ceiling, walls, floor) of the building using a low-volume, high-pressure washer.

5.1.12 Utility Support Towers

Two metal support towers are located in close proximity to Asarco's WTF. The towers support active electrical conduits and water carrying pipes. The contractor shall anticipate minimal bulk solids removal from the towers and the surrounding area. Lift trucks or man hoists will be necessary to access the upper portions of the support towers. Some process material has adhered to the tower metal supports, which may require jack hammering or other physical removal methods. Once all bulk solids are removed and the two towers and surrounding areas have been vacuum cleaned, the contractor shall wash the towers using a low-volume, high-pressure washer.

5.1.13 Concentrate Storage and Handling Building (CSHB)

The concentrate storage and handling building (CSHB) was placed into operations in 1990 to house the majority of concentrate unloading and handling operations. Concrete bins stored materials such as concentrates, by-products, coke breeze, limerock, and silica. A bridge crane accessed material from railcars and from within the bins for placement into material feeders. Feed hoppers proportioned the material onto conveyor belts for delivery to the now demolished sinter plant. The contractor shall anticipate significant bulk solids removal from this building, particularly behind the bins walls, inside the feed hoppers, within the feed area, and along support beams. Some process material may have adhered to the building or bin surfaces, which may require jack hammering or other physical removal methods. The contractor shall expect to use large mechanical equipment and considerable human resources to remove the bulk solids. The contractor shall also remove all visible process materials surrounding the building.

The contractor shall vacuum clean the interior and surrounding areas of the CSHB. This task involves removing all process material from but not limited to the interior of bins, behind bin walls, hoppers, feeders, cranes, railways, and belt lines. The large bins in the Concentrate Storage and Handling Building may be difficult to access. The contractor may consult with Asarco personnel to determine alternative access to bin interiors (i.e., creating access ports in bin walls). Once all bulk solids are removed and the entire interior of the building has been

vacuum cleaned, the contractor shall wash the interior of the building using a low-volume, high-pressure washer. Excess wash water shall not be allowed to stand for lengthy periods of time in areas of the CSHB and must be completely collected by the contractor by the end of each workday.

5.2 CLEANING OF BUILDINGS AND STRUCTURES PRIOR TO DEMOLITION

The cleaning of buildings and structures prior to demolition are shown on Sheet 5 in Appendix B. The cleaning of building and structures that will be demolished shall consist of:

- Prepare identified work areas,
- Conduct initial, dry removal of bulk solids,
- Place removed bulk solids in sealed containers, and
- Haul sealed containers to CAMU Phase 2 Cell.

When compared to the cleaning of buildings and structures that are not scheduled for demolition, those buildings and structures that are scheduled for demolition will require less precise cleaning. The reduced level of cleaning reflects the fact that the building and structures will be demolished and will no longer exist. As before, work area preparation will consist of delineating a work area that can be both easily contained and is considered a cohesive area unit. Once the work area has been defined, the contractor shall begin the removal of bulk solids. The goal of this task will be to remove the gross, dry accumulation of contamination (baghouse bags, process material, etc.) at all accessible areas. Personnel utilizing hand tools shall perform these tasks. A trailer mounted industrial vacuum system equipped with HEPA filtration shall augment the dry removal of process material. Material collected using these procedures shall be loaded via airtight chute into appropriate containers (i.e., double 6-mil mega bags, etc.), weighed, and hauled to the CAMU Phase 2 Cell. The removal of the baghouse bags and dry accumulation of process material will ensure more effective dust control during demolition. The specific cleaning procedures for building, structures, and tanks that are scheduled for demolition is discussed below.

5.2.1 Sample Mill and Dust Loadout Baghouses

The sample mill building served to prepare and split incoming ore concentrates, interplant by-products, crude ores, and high-grade ores prior to chemical analysis and moisture content determination. The individual sample mill process equipment included scales, bucking tables, rod mills, and drying ovens. The bucking rooms were ventilated by the sample mill baghouse. The dust loadout facility was used sparingly to ventilate blast furnace baghouse dust transfer. The contractor shall remove all the bags from the sample mill and dust loadout baghouses and vacuum clean the baghouse interiors prior to demolition.

5.2.2 Crushing Mill Baghouses

The crushing mill was used for size reduction and sampling of crude ores and plant by-products. The individual crushing mill process equipment includes a track hopper, conveyor belts, crushers, feeders, screens, and samplers. The crushing mill utilized three baghouses (two of which are also known as the No. 7 and No.8 sinter plant baghouses) to provide source ventilation. The contractor shall remove all the bags from the baghouses and vacuum clean the baghouse interiors prior to demolition.

5.2.3 Sinter Stockpile Building Baghouse

The sinter stockpile building temporarily stored sinter prior to it being processing in the now demolished blast furnace. The sinter stockpile baghouse is located on top of the sinter stockpile building. The contractor will remove all the bags from the baghouse and vacuum clean the baghouse interior prior to demolition.

5.2.4 Concentrate Storage and Handling Building (CSHB) Baghouses, Ventilation Ductwork, and Stack Base

Two large baghouses provided ventilation to the CSHB. A smaller baghouse provided ventilation to the CSHB feeder area. The sinter plant weak gas handling baghouse and new crushing mill baghouse are attached to the east side of the CSHB. The contractor shall remove all the bags from the baghouses and vacuum clean the baghouse interiors, all associated ventilation piping, and the associated stack base prior to demolition. In addition, the contractor shall relocate and resupport overhead power lines and an above ground gas line

attached to these structures prior to cleaning. Relocation of the power lines will require a variance from the FAA, which the contractor will be responsible for obtaining, as this line supplies power to the Blast Furnace Stack beacon lights.

5.2.5 Hopto Pad, Storage Bins, and Conveyor Gallery

The hopto pad, storage bins, and conveyor unloaded and transferred certain ores and by-products. The ores and by-products were unloaded by a large back-hoe (hopto), placed into a storage bins or receiving hopper, and transferred via a conveyor belt system to the former ore receiving and proportioning building, now known as the direct smelt building. The contractor shall remove any large debris and vacuum clean the hopto pad, storage bins, conveyor gallery, and associated tunnel prior to demolition.

5.2.6 Acid Dust Facility

The facility stored acid dust within an enclosed silo. The acid dust was agglomerated prior to being conveyed to the CSHB. A small bin ventilation baghouse is located on the top of the silo. The contractor will remove all the bags from the baghouse and vacuum clean the baghouse interior. The contractor will vacuum clean the interior of the silo and acid dust building prior to demolition. In addition, the contractor shall relocate and resupport overhead power lines attached to the structure prior to cleaning. Relocation of the power lines will require a variance from the FAA, which the contractor will be responsible for obtaining, as this line supplies power to the Blast Furnace Stack beacon lights.

5.2.7 Groundwater Sump

The sump previously collected groundwater in the vicinity of the direct smelt building. Groundwater was pumped from the sump to the internal water handling system to prevent flooding of nearby buildings. After re-construction of the direct smelt building, the necessity of the sump was eliminated. The sump has not been used in the last 10 to 15 years. The contractor shall vacuum clean the base of the four-foot diameter, 14 ½-foot deep groundwater sump that exists near the highline railroad prior to abandonment.

6.0 DEMOLITION

The demolition activities set forth in this Work Plan require extensive experience to coordinate services and minimize migration of dust and material. The demolition of a structures and buildings shall be achieved in a variety of manners depending on the type of structure, reasons for demolition, the proximity to the surrounding structures, safety, and the requirements for salvage. The contractor shall use a sequence of demolition approach for the major building structure and shall compile information from the onsite as-built drawings, and onsite inspections of the buildings to allow our operations and staff to formulate a sequence of demolition of each building to ensure safe working conditions.

As with every demolition project, the principle considerations are stability of the building structure and the safety of the working personnel and related areas within the collapse envelope of the structures. The following section outlines contractor demolition procedures. A 2009 Demolition Plan Map, Sheet 6 in Appendix B, shows the demolition locations discussed in this section. The demolition activities may only commence after the historic survey and recordation phase of the Work Plan has been completed and notice to proceed has been issued by MDEQ and EPA.

6.1 ISOLATION ACTIVITIES BEFORE DEMOLITION OF STRUCTURES

Before and/or concurrent with the cleaning of process material, the contractor shall conduct isolation activities to create a physical separation of the Work Plan areas from the surrounding structures to include but not limited to piping, conduits, and buildings that are to remain in place. This process shall be conducted using a variety of methods that employ both excavators equipped with shear attachments and laborers with hand tools and cutting equipment. Prior to initiation of the isolation work, the contractor shall perform an investigative site walk with Asarco personnel to re-mark and re-designate the lines of separation between the demolition areas and surrounding areas to remain.

Upon completion of the isolation task, a physical separation shall exist that will ensure areas to remain are protected in place and that the demolition activities can progress unimpeded. The contractor shall inspect the operations to ensure that exclusion zones are established and that safe working conditions exist at all times. The contractor shall conduct regular daily safety meetings to discuss methods, exclusion zones, and safety practices.

6.2 DEMOLITION OF BUILDINGS AND STRUCTURES

Four general areas have been identified for demolition under the Work Plan. The structures, soil berm, and railroad tracks scheduled for demolition and removal in the vicinity of the sample mill and crushing mill are shown on Sheet 7 in Appendix B. The structures scheduled for demolition in the hopto pad, storage bins, and conveyor gallery, and acid dust facility are shown on Sheet 7 in Appendix B. The structures scheduled for demolition in the vicinity of the sinter stockpile building, railroad highline, abandoned and new breaking floor buildings, groundwater sump, sinter plant stack, acid plant stack, and blast furnace stack are shown on Sheet 8 in Appendix B. The structures scheduled for demolition associated with the CSHS ventilation system and stack are shown on Sheet 9 in Appendix B. All demolition material and excavated soil shall be hauled to the CAMU Phase 2 Cell. Recyclable material shall be managed in accordance with the procedures set forth in Section 2.3, Recyclable Material Plan. The two stockpiles of used railroad ties that are stored near the facility main entry gate and on the northwest section of the slag pile shall be placed in the CAMU Phase 2 Cell.

6.2.1 Sample Mill

Once the pre-cleaning, cleaning of the sample mill baghouse, and the historic survey and recordation of the sample mill are complete, demolition can commence. The contractor will remove the entire sample mill structure to grade level. The railroad rails and ties south and north of the sample mill shall be removed. A soil berm, shown on Sheet 7 in Appendix B, shall be removed to allow for proper drainage of the interim liner once installed within the demolition area. In addition, two columns that once supported previously removed ventilation piping and several poles shall be demolished.

6.2.2 Crushing Mill

Once the pre-cleaning, cleaning of the crushing mill baghouses, and the historic survey and recordation of the crushing mill are complete, demolition can commence. The contractor will remove the entire crushing mill structure to grade level. The contractor shall remove all underground conveyors in the vicinity of the crushing mill hopper. A soil berm and section of railroad track, shown on Sheet 7 in Appendix B, shall be removed to allow for proper drainage of the interim liner once installed within the demolition area.

6.2.3 Hopto Pad, Storage Bins, and Conveyor Gallery

Once the pre-cleaning, cleaning of the hopto pad, storage bins, and conveyor gallery area, and the historic survey and recordation of this area are complete, demolition can commence. Demolition shall include removing all concrete walls to grade level, cutting all protruding rebar to grade, and knocking in the tunnel roof, shown on Sheet 7 in Appendix B, to allow for easy backfill operations.

6.2.4 Acid Dust Facility

Once the pre-cleaning, cleaning of the acid dust facility, baghouse, and silo, and the historic survey and recordation task for the acid dust facility are complete, demolition can commence. The contractor shall remove the entire acid dust facility structure, as shown in Sheet 7 in Appendix B, to grade level. The acid dust facility shall be removed without compromising the integrity of the CSHB. The contractor shall patch any openings in the CSHB created from removal of this structure to the satisfaction of Asarco. This will involve the contractor submitting in writing a plan for patching the building, which is acceptable to Asarco.

6.2.5 Sinter Stockpile Building

Once the pre-cleaning, cleaning of the sinter stockpile building baghouse, and the historic survey and recordation of the sinter stockpile building are complete, demolition can commence. The contractor shall remove the entire sinter stockpile building structure, as shown on Sheet 8 in Appendix B, to grade level.

6.2.6 Highline Railroad

Once the pre-cleaning and the historic survey and recordation of the highline railroad are complete, demolition can commence. The contractor shall remove the entire highline railroad and associated structures, as shown on Sheet 8 in Appendix B, to grade level. The large cement bins associated with the highline railroad and highline sump shall be removed to grade level. Some structures associated with the highline railroad are attached to the Direct Smelt Building. These structures shall be removed without compromising the integrity of the Direct Smelt Building. The contractor shall patch any openings in the Direct Smelt Building created from removal of these structures to the satisfaction of Asarco. This will involve the contractor submitting in writing a plan for patching the building, which is acceptable to Asarco. The contractor shall be careful not to damage the water transfer line located close to this structure.

6.2.7 Abandoned and New Breaking Floor Buildings

Once the pre-cleaning and the historic survey and recordation of the abandoned and new breaking floor buildings are complete, demolition can commence. The contractor shall remove the entire abandoned and new breaking floor buildings, as shown on Sheet 8 in Appendix B, to grade level. Some structures associated with the Abandoned breaking floor building are attached to the Direct Smelt Building. These structures shall be removed without compromising the integrity of the Direct Smelt Building. The contractor shall patch any openings in the Direct Smelt Building created from removal of these structures to the satisfaction of Asarco. This will involve the contractor submitting in writing a plan for patching the building, which is acceptable to Asarco. The contractor shall be careful not to damage the water transfer line located close to this structure.

6.2.8 Groundwater Sump

Once the pre-cleaning, cleaning, and the historic survey and recordation of the groundwater sump are complete, demolition can commence. The contractor shall abandon the above ground section of the four-foot diameter, 14 ½ foot deep sump, as shown on Sheet 8 in

Appendix B, that exists near the highline railroad. The contractor shall grade and back fill the sump with flowable fill according to specifications set forth in Section 12.0.

6.2.9 CSHB Ventilation System and Stack

Once the pre-cleaning, cleaning of the ventilation system and stack base, and the historic survey and recordation task for the CSHB ventilation system and stack are complete, demolition can commence. The contractor shall remove the entire CSHB ventilation system and stack, as shown in Sheet 9 in Appendix B, to grade level. No special procedures are expected for demolition of the CSHB stack. The CSHB ventilation system and stack shall be removed without compromising the integrity of the CSHB. The contractor shall patch any openings in the CSHB created from removal of these structure to the satisfaction of Asarco. This will involve the contractor submitting in writing a plan for patching the building, which is acceptable to Asarco. All concrete footings and slabs in this area shall be left in place and any protruding steel shall be cut to grade. Any structure, building, monitoring well, lining system, roadway, competent concrete, or similar feature impacted by the demolition of the ventilation system will be repaired or replaced by the contractor. In addition, the contractor will be responsible for the integrity of the existing interim temporary cover system.

6.2.10 Acid Plant Stack, Blast Furnace Stack, and Sinter Plant Stack

In accordance with the AOC, the interior cleaning of these three stacks took place during the third quarter 2007. No additional cleaning is required prior to the demolition of these stacks. The contractor shall demolish the three stacks in accordance with the SDP. The contractor will be responsible for protecting surrounding structures, including windows, doors, and equipment. Any structure, building, monitoring well, lining system, roadway, competent concrete, or similar feature impacted by the demolition of the stacks will be repaired or replaced by the contractor. In addition, the contractor will be responsible for the integrity of the existing interim temporary cover system. The contractor shall remove the entire above grade section of the three stacks, as shown on Sheet 8 in Appendix B.

6.2.11 Miscellaneous Railroad Ties

Previous used, miscellaneous railroad ties are located at two sites, as shown on Sheet 2 in Appendix B. The railroad ties located at these two sites locations shall be transported by the contractor to the CAMU Phase 2 Cell.

6.3 STOCKPILING AND MATERIAL SIZING

As demolition progresses, material may be stockpiled in designated material staging and processing areas located within the demolition area footprints, as shown on Sheet 6 in Appendix B. Both general demolition debris and recyclable material may be sized at these locations to meet the requirements for final disposition. Once demolition debris and salvage material has been segregated and sized, the contractor will load, direct the loads for weighing (to be performed by Asarco's engineering consultant), and transport to the CAMU Phase 2 Cell or a recycling location. The contractor must coordinate these activities with Asarco's engineering consultant. The contractor shall ensure that CAMU Phase 2 Cell bound material is sized to be less than 24 inches in one dimension. The contractor shall size the recyclable material to its requirements and stage these materials for eventual loading into railcars and/or trucks for transport to the recycling facility.

7.0 WASTE AND RECYCLABLE MATERIAL MANAGEMENT

The contractor shall utilize the components of this Work Plan section for coordination and off-site management of the waste streams and recyclable materials that are expected to be generated during the Work Plan. This Work Plan section has been developed to provide guidance, direction, and procedures for managing waste steams (both solid and liquid) and recyclable materials generated as a result of pre-cleaning, cleaning, and demolition activities.

7.1 MATERIAL SCENARIOS AND MANAGEMENT OPTIONS

During the Work Plan implementation, waste streams and recyclable material are expected to be generated. The potential categories and required management options are:

- Friable and non-friable ACM – CAMU Phase 2 Cell,
- Used oil and liquids – Off-site management,
- Universal waste (UW) – Off-site management,
- PCB light ballast – Off-site management,
- Refrigerant – Off-site management,
- Recyclable material - Off-site management,
- Cleaning and demolition material – CAMU Phase 2 Cell, and
- Storm water sump sludge – Off–site management.

Asarco does not anticipate encountering any non-CAMU eligible wastes other than those outlined above. Non-CAMU eligible waste will be managed in accordance with applicable rules and regulations. The contractor shall be responsible for the management of friable and non-friable ACM, refrigerant, recyclable material, and cleaning and demolition material. Asarco will manage the used oil and liquids, universal waste, and PCB light ballast that have been placed in the Shop storage building.

7.2 MANAGEMENT OF NON-CAMU MATERIAL STREAMS

The contractor shall containerize all non-CAMU Phase 2 Cell destine material that may encountered during the Work Plan implementation. Recyclable materials will be containerized to meet the specifications of the recycling facility. For all other non-CAMU Phase 2 Cell destine materials, the contactor shall use containers made of or lined with components, which will not react with, and are otherwise compatible with, the material to be transferred or stored, so that the ability of the container to contain the waste is not impaired. If a container holding non-CAMU Phase 2 Cell material becomes compromised (e.g. severe rusting, apparent structural defects), or if it begins to leak, the contractor shall immediately transfer the material to a secure container. The contractor shall inspect containers and areas used to accumulate containerized materials at least weekly. Asarco will be responsible for inspecting containers placed into the shop storage building.

Incompatible wastes shall not be placed within the same container. The contractor shall handle and manage incompatible waste in such a manner that prevents violent reactions, generation of uncontrolled fumes, mists, gases and dusts, production of flammable fumes or gases and damage to the integrity of the material container.

Hazardous materials shall not be placed in an unwashed container that previously held an incompatible material. A container holding hazardous materials that is incompatible with any material transferred or stored nearby in other containers, piles, open tanks, or surface impoundments shall be separated from the other material.

The contractor shall store all hazardous material in containers suitable for transport in accordance with 49 CFR Parts 170 through 179 or the requirements of the transporter, whichever is more stringent. No material shall be transferred or stored in a manner, which may rupture the container or cause it to leak.

7.3 LABELING OF MATERIALS

The contractor shall apply proper marking and labeling on all containers when the material is first placed inside the container. Hazardous material that is stored in bulk shall be posted with a sign that bears an appropriate label as well as the information required for waste area signs, as applicable.

During pre-cleaning activities or as otherwise encountered, the contractor may encounter waste streams that are placed into unidentified containers or the exact contents are unknown. For those instances, the contractor will mark the container with a "Non-Classified Material: Laboratory Analysis in Progress" label. This label will identify the material as an uncharacterized material stream. The contractor shall indicate on the label where the containerized material originated and, if a reasonable amount of information is available, the suspected material contents. An accumulation date will be added to the label. The contractor shall immediately notify Asarco when unidentified materials are first encountered. The material determination and accumulation of materials shall be managed in accordance with applicable rules and regulations.

7.4 MANAGEMENT OF CAMU APPROVED MATERIAL

Demolition material will be loaded with track or rubber-tired loaders and transported via trucks to the CAMU Phase 2 Cell. Friable ACM shall be wrapped and contained, loaded, weighed, transported, and placed in the CAMU Phase 2 Cell in such a manner that the integrity of the wrapping is not breached. At no time will friable material be exposed to the environment. Non-friable ACM does not require special containerization prior to placement in the CAMU Phase 2 Cell. The contractor shall strictly enforce the dust control measures, as described in the DCP, to ensure control of materials placed in the CAMU Phase 2 Cell. The placement of waste into the CAMU Phase 2 Cell will be governed by the specifications set forth in the approved CAMU Design Analysis Report (including the May 22, 2008 addendum) as discussed in Section 8.0. A copy of the CAMU Design Analysis Report will be provided to the contractor.

7.5 MATERIAL MANAGEMENT QUALITY CONTROL

Material management quality control will be accomplished through the use of administrative, engineering, and physical controls that will include, but not be limited to the following:

- Routine inspections of material storage areas,
- Curtailing of work activities during high wind conditions (over 15 MPH average hourly rate),
- Curtailing of material handling and transport during rain events with sufficient volume to create run-off,
- Pre-identification and handling of material requiring special management, and
- Decontamination of equipment used to handle material.

7.5.1 Inspections

The contractor shall implement inspection procedures to assure control of material that have been placed into material storage areas. The contractor shall conduct, at least weekly, inspections of the areas designated for container storage or transfer. The contractor shall inspect the area for evidence of deterioration of containers and secondary containment. Additionally, inspection of container labeling and accumulation dates will be completed to ensure that all containers are properly and legibly labeled. Accumulation dates will be reviewed for compliance. The contractor shall inspect containers and storage areas to ensure that they are not, have not, and will not be susceptible to any weather event that could cause release of a hazardous material streams onto the site or into the storm water system.

7.5.2 Work Stoppage

The contractor shall halt work when weather conditions are such that the spread of contaminated dust and debris is likely. These conditions typically exist when there is excessive wind and/or rain. Therefore, if wind with a 15 MPH average hourly rate or more are present, the contractor shall halt the handling of waste. If a rain event begins, the contractor shall evaluate the site conditions. If the rain presents no run-off, work activities will proceed uninhibited. In the rain presents run-off conditions, the work activities shall

cease until such time that a run-off potential is not present. The contractor will evaluate these conditions with Asarco's engineering consultant.

7.5.3 Special Material Handling and Segregation

The contractor will ensure that all material requiring special handling have been removed from the structures to be demolished. Special materials shall consist of ACM, UW, used oils, and liquid wastes, PCB ballasts, and refrigerant. UW, liquid wastes, PCB ballast, and refrigerant shall be removed from buildings and structures, handled, and stored as non-CAMU Phase 2 Cell materials. ACM material that is scheduled for placement in the CAMU Phase 2 Cell will be segregated.

7.5.4 Decontamination of Equipment

The contractor shall provide for the decontamination of equipment used in the handling and/or transport of demolition debris prior to the equipment leaving the site, or moving from a demolition zone to an area considered clean. The contractor shall establish a decontamination pad, in an area agreed and approved by Asarco. The location of the decontamination pad may change depending upon demolition activities and the evolution of the project site. This decontamination pad shall be situated on a concrete slab suitable for placement of heavy equipment.

Decontamination will consist of one or a combination of the brushing, vacuuming, or washing methods. The goal of the decontamination is to remove metal bearing dust and debris from the areas of the equipment that came into contact with this material. Upon completion of the decontamination activity, any removed dust and debris will be hauled to the CAMU Phase 2 Cell.

Equipment that has been decontaminated will be inspected upon completion to ensure the adequacy of the process and to document the process to ensure quality control.

8.0 WASTE HAULING, PLACEMENT, AND CAMU PHASE 2 CELL OPERATION AND CLOSURE

8.1 OPENING CAMU PHASE 2 CELL FOR WASTE PLACEMENT

The contractor shall be responsible for opening the CAMU Phase 2 Cell prior to the placement of waste material generated under this Work Plan. The contractor shall ensure that all site storm water controls are in proper working order, make any necessary repairs, and follow all state and federal storm water regulations. The temporary reinforced polyethylene (RPE) liner, currently covering the waste shall be removed by the contractor and saved for reuse once 2009 demolition waste placement is complete or shall be left in place, thoroughly perforated by the contractor so that it will not hold water, prior to waste placement, and replaced with a new temporary cover at the end of the 2009 construction season. Asarco prefers that the existing temporary RPE liner be reused. However, the contractor shall be responsible for determining the most cost effective option. If the temporary RPE liner is saved for reuse, it shall be peeled back with care taken not to tear or contaminate it. The contractor shall be responsible for ensuring that the liner currently in contact with hazardous waste does not come in contact with the clean side of the liner. If the clean side of the liner comes in contact with the dirty side of the liner, the contractor shall be responsible for replacing the liner. If the contractor determines that leaving the current RPE liner in place and furnish a new temporary liner is the most cost effective approach, the contractor shall cut the existing RPE liner and underlying 10-ounce non-woven geotextile into pieces that are 36 square feet or smaller. For both options, the contractor will need to remove the RPE liner and geotextile around the exterior of the CAMU Phase 2 Cell, including the liner buried in the anchor trenches, so that the liner does not extend past the boundary of the cell. Any RPE liner and geotextile material placed in the CAMU Phase 2 Cell shall be sized to less than 6-foot by 6-foot sheets before being placed in the CAMU Phase 2 Cell. The contractor shall place these sheets in the CAMU Phase 2 Cell under the direction of Asarco's engineering consultant.

8.2 CAMU WATER MANAGEMENT

Any storm water contacting the waste material shall not be discharged, but shall be transferred to the Asarco WTF. The contractor shall be responsible for management of water reporting to the CAMU Phase 2 Cell leachate collection sump while the CAMU Phase 2 Cell is open. Asarco's engineering consultant will be responsible for management of water reporting to the CAMU Phase 2 Cell leak detection sump throughout Work Plan implementation. The contractor shall have readily available pumps capable of pumping 400 gallons per minute in the event of a significant rainfall event. The contractor will remove any water from the leachate collection system, collect the water in a tank, and deliver the water to the Asarco's WTF.

8.3 ON-SITE DEBRIS TRANSPORTATION

The contractor shall implement a proactive approach to ensure that the transportation of waste debris does not generate dust or spread waste debris outside the limits of the loading area and the final CAMU Phase 2 Cell placement area. For all management of demolition debris, the contractor shall utilize the Dust Management Plan. The implementation of the Dust Management Plan will minimize airborne dust during the loading operation and constitute the initial dust prevention step during transportation. The contractor shall use end dump trucks, side dump trucks, 10-wheel dump trucks, or similar containerized equipment to haul the material to the CAMU Phase 2 Cell. All trucks must be equipped with sealed tailgates that will be closed during times of hauling to ensure that debris is not released outside the limits of the loading and dumping area.

8.4 OFF-SITE PREPARATION AND TRANSPORT

The contractor shall ensure that the debris leaving the facility for eventual placement in the CAMU Phase 2 Cell, is weighed, sampled, and moistened and is responsible for coordinating with Asarco's engineering consultant. ACM shall be weighed but not sampled. The contractor shall direct all haul trucks to an on-site scale for weighing. Asarco's engineering consultant shall weigh and photograph all waste being transported to the CAMU Phase 2 Cell. Representative samples will be collected from the trucks payload at the interval

specified in Section 9.0 of this Work Plan. The contractor shall erect and use a moistening station that consists of a scaffolding platform on which personnel will mist water on the loaded debris as a final step before exiting the site. The water spray will add a final moisture barrier and binder to the debris for the short distance haul to the CAMU Phase 2 Cell. All transport vehicles shall be limited to a maximum of 10 miles per hour during transport. Limiting speeds shall minimize dust from becoming airborne during transport and shall minimize kick-up from rolling tire action. In addition, the contractor shall place and maintain large gravel on a section of the haul route at the plant exit and CAMU exit, to remove loose dust and debris from haul truck tires. Once hauling of waste is complete, the contractor will place this gravel material in the CAMU Phase 2 Cell.

8.5 PLACEMENT OF WASTE

Once haul trucks arrive at the CAMU Phase 2 Cell, the material will be placed into the cell at a location specified by the contractor. ACM is the only material with a designated location within the CAMU Phase 2 Cell. Asarco's engineering consultant will direct the contractor to this location. A water truck shall be located in close proximity to the CAMU Phase 2 Cell to lightly mist debris and knock down any dust during the material dumping and spreading phase. The use of water will be kept to a minimum. Additional water will be applied to locations in the CAMU Phase 2 Cell to minimize the potential for fugitive dust emissions. Asarco reserves the right to stop placement of waste in the CAMU Phase 2 Cell if visible fugitive dust emissions are present. Materials will be placed and compacted in the cell to minimize voids, settlement, and damage to the liners. Demolition debris and waste soils will be placed and compacted in the cell in lifts not to exceed 2 feet thick across the bottom of the cell. All materials delivered to the cell for placement will require some segregation. This will allow consolidation of the materials during compaction and will result in a homogeneous mass with a minimal amount of voids. Specifically, bulk concrete and metal debris will be broken or otherwise reduced in size not to exceed a vertical dimension of 2 feet. There are no horizontal or width dimension restrictions other than the debris must fit in a haul truck to be transported to the CAMU Phase 2 cell. All material requiring size reduction will be resized at the structure demolition site using excavators with concrete breakers or shears before being

transported to the CAMU Phase 2 Cell. Large organic material (e.g. timbers) and manufactured metal will be placed horizontally in the cell as flat as possible to minimize voids. The railroad ties placed in the CAMU Phase 2 Cell will not be piled in one location, but will be spread out evenly throughout the CAMU Phase 2 Cell footprint. Asarco's engineering consultant will inspect the open CAMU Phase 2 Cell at least twice daily to assess the potential for windblown dispersion of fugitive dust.

8.6 WASTES REQUIRING SPECIAL MANAGEMENT

Wastes requiring special management include ACM and heavy metal dust from cleaning activities. The procedures for containerizing these wastes shall be conducted in the demolition areas prior to the materials being loaded on haul trucks. ACM and heavy metal dust will be handled according to the procedures outlined in Section 2.0 of this Work Plan and in the contractor's HMAP. All friable ACM shall be wrapped, contained, loaded, transported, and placed in the southwest corner of the CAMU Phase 2 Cell in such a manner that the integrity of the wrapping is not breached. Once the ACM has been placed in the cell, its location will be surveyed by Asarco's engineering consultant. The ACM shall be covered daily with soil to maintain the integrity of the wrapping. The location of the ACM shall be shown on the as-built drawings of the CAMU Phase 2 Cell. At no time will friable ACM be exposed to the environment. Non-friable ACM will be loaded and transported as described above for demolition debris. All ACM (both friable and non-friable) will be completely covered at the end of each work-day

8.7 WORK STOPPAGE

Work shall halt when weather conditions are such that the spread of contaminated dust and debris is likely. These conditions typically exist when there is excessive wind and/or rain. Therefore, if wind with sustained readings of 15 MPH (average hourly rate) or more occur, the handling and hauling of waste both on-site and off-site will halt. The sustained wind speeds will be monitored by Asarco's engineering consultant through the use of a calibrated on-site anemometer and through data provided by the National Oceanic and Atmospheric Administration (NOAA) at www.noaa.gov for wind speeds at the Helena Airport.

Furthermore, if a rain event begins, site conditions will be re-evaluated. If a rain event begins, the contractor shall evaluate the site conditions. If the rain presents no run-off, work activities will proceed uninhibited. In the rain presents run-off conditions, the work activities shall cease until such time that a run-off potential is not present. The contractor will evaluate these conditions with Asarco's engineering consultant. In the event that transport is halted, no additional trucks will be loaded and trucks containing wastes will be covered until conditions improve.

8.8 DECONTAMINATION AND INSPECTION OF EQUIPMENT

The equipment used in the handling and/or transport of demolition debris will be decontaminated prior to the equipment leaving the site, or moving from a demolition zone to an area considered clean. Decontamination pads, a concrete slab suitable for placement of heavy equipment, will be established, in areas agreed upon with and approved by Asarco. The location of the decontamination pads may change as demolition activities progress. However, all equipment will be decontaminated within close proximity to exits from the Asarco facility. The equipment that has been decontaminated will be inspected upon completion to ensure the adequacy of the process and to document the process to ensure quality control prior to the transport vehicle leaving the site.

Decontamination will consist of one or a combination of brushing, vacuuming, or washing methods. The goal of the decontamination is to remove heavy metal laden bearing dust and debris from the areas of the equipment that contacts the waste. Upon completion of the decontamination activities, any removed dust and debris residue will be hauled to the CAMU Phase 2 Cell.

Haul trucks leaving the CAMU Phase 2 Cell will be traveling on paved haul roads and will not be decontaminated until enter the Asarco smelter facility, where they will be decontaminated on one of the decontamination pads. Any large debris will be dislodged from haul trucks as they leave the CAMU Phase 2 Cell. The section of haul road between the

CAMU Phase 2 Cell and the Asarco facility will be monitored and swept on a regular basis. Asarco's engineering consultant shall inspect the haul road twice daily.

Transport vehicles will be inspected periodically to ensure that truck beds and gates are properly sealed and that debris is not building up. Full decontamination of vehicles that are leaving the Asarco facility should occur periodically.

The equipment used in the CAMU Phase 2 Cell for spreading and compacting waste will be decontaminated at the Asarco facility. This equipment will be placed on trailers and driven via the haul road back to the Asarco facility for decontamination in a designated area.

8.8.1 Work and Road Surface Cleaning

The contractor shall implement the road surface cleaning procedures set forth in the Dust Control Plan.

8.9 SPILL MITIGATION

Spills of soils or debris being transported to the CAMU Phase 2 Cell shall be prevented by constant maintenance of trucks to make sure they are properly sealed and in good working order. In addition, traffic control and slow truck speeds will minimize the occurrence of accidents. If waste is spilled in route to the CAMU Phase 2 Cell, the hauling of waste will halt and the spilled waste will be cleaned using clean decontaminated equipment. If the spill occurs on the haul road, the road will be swept clean.

The twice-daily inspections, Section 8.10, of the area surrounding the CAMU Phase 2 Cell shall include observations for visible fugitive emissions. If a release from the area is observed during an inspection, the waste will be removed and cleaned using clean decontaminated equipment and placed in the CAMU Phase 2 Cell.

8.10 SITE INSPECTIONS – OPERATION

Asarco's engineering consultant will perform inspections of areas surrounding the CAMU Phase 2 Cell and the haul road between the CAMU and ASARCO smelter facility twice daily when the CAMU cell is in operation. Daily inspections of the road used for hauling waste will occur when the haul road is in use. While the CAMU cell is in operation it will be inspected once per week by Asarco's engineering consultant. Quarterly monitoring of groundwater quality and semi-annual site inspections will ensure that public health and safety are maintained at the site. Monitoring and inspection protocol shall be conducted consistent with the CAMU Phase 2 Cell Operating Plan.

8.10.1 Daily Inspections

While the landfill is in operation, inspection of the grounds surrounding the CAMU shall be inspected twice daily. These inspections shall include an assessment of the potential for windblown dispersion of fugitive dust from the CAMU and a visual inspection of the grounds surrounding the CAMU for any visible releases of fugitive dust from the CAMU cell. The haul route used by trucks leaving the CAMU and returning to the ASARCO smelter facility shall also be inspected twice daily to ensure that it remains clean and free of dust and debris. The remainder of the haul road shall be inspected once per day to ensure that it is free of dust and debris. Daily inspections shall be documented and recorded on the Daily Inspection Form included in the CAMU Design Analysis Report and any problems found will be reported to the project manager and addressed immediately.

8.10.2 Weekly Inspections

While the landfill is in operation, it shall be inspected weekly and after significant storms to detect evidence of any deterioration, malfunctions, or improper operation of run-on and runoff control systems, and the proper performance or presence of liquids in the leachate collection and leak detection system. Inspection of the perimeter fence, gates, condition of haul roads, condition of storm water pond, presence of precipitation run-off or ponded liquids, condition of decontamination pads, and the condition of haul trucks will be included

in weekly inspections and any maintenance needed will be recorded on the Weekly Inspection Form included in the CAMU Design Analysis Report and addressed appropriately.

8.11 CLOSING THE CAMU PHASE 2 CELL

Upon completion of placement of demolition debris and waste soils in the CAMU Phase 2 Cell, the temporary RPE CAMU cap shall be constructed. This component of the CAMU Phase 2 Cell temporarily closes the CAMU Phase 2 Cell and prevents infiltration of precipitation. The temporary RPE cover consists of a 24-mil RPE , underlain by a geotextile, as specified in the CAMU Design Analysis Report, "Design Analysis Report, Asarco East Helena, Corrective Action Management Unit (CAMU) Phase 2 Cell, July, 2008", approved by the EPA. The contractor shall grade all waste placed in the CAMU Phase 2 Cell according to the specifications in the CAMU Design Analysis Report to allow for proper drainage off the temporary cover. In addition, the contractor shall ensure that no rebar, sharp metal, or sharp concrete edges protrude from waste. The temporary cover shall be installed according to the design drawings and specifications presented in the approved CAMU Design Analysis Report.

9.0 WASTE SAMPLING AND ANALYSIS

Asarco's engineering consultant in coordination with the contractor shall implement the components of the waste sampling and analysis. The waste sampling and analysis section of the Work Plan is designed to assess representative samples of waste being hauled and placed in the CAMU Phase 2 Cell. This section provides the methodology and procedures for each sampling and analysis task. The collection of representative samples and characterization of waste being hauled to the CAMU Phase 2 Cell will conduct the follow tasks:

- Description of payload inside sampled trucks,
- Photo-documentation the truck payload,
- Grab sampling of wood, dirt, dust, brick, railroad ties, and concrete materials, and
- Laboratory analyses of collected grab samples.

9.1 SAMPLING FREQUENCY AND PROCEDURES

The cleaning and demolition waste and miscellaneous railroad ties being hauled to the CAMU Phase 2 Cell for disposal will be sampled from the payload of the haul truck, after the haul truck has been weighed but prior to the haul truck leaving the Asarco facility. The payload of each truck will be recorded and a photograph will be taken.

During Work Plan implementation, four work areas will have demolition material removed and transported to the CAMU Phase 2 Cell. These work areas are presented in Table 9-1. The materials being hauled to the CAMU Phase 2 Cell from cleaning activities are not included in Table 9-1, as quantities of these materials cannot be determined. The work area designations are based on the contractors schedule for demolition, processes that occurred in these areas, and the materials used to construct the buildings. A sample will be collected from one out of every 20 trucks hauling waste from each work area. At least one sample will be obtained from each of the four areas for every 20 haul trucks that transport waste from that area to the CAMU Phase 2 Cell. The CSHB ventilation system and stack are mainly composed of metal. The majority of the material should be recyclable. If non-recyclable

material is hauled from this area to the CAMU Phase 2 Cell, one sample will be collected from every 20 haul trucks, assuming that the material being hauled is not metal. In addition, one sample will be collected from every 20 haul trucks from waste generated by cleaning activities. The quantity of material generated by cleaning activities and the quantity of railroad ties to be hauled to the CAMU Phase 2 Cell is unknown and is therefore not included in Table 9-1.

TABLE 9-1. MATERIAL VOLUMES AND ESTIMATED SAMPLES

2009 Work Plan Work Areas	Material Volume (cubic yards)	Number of Haul Trucks (assume 15 yards/truck)*	Minimum Number of Samples (1/20 trucks)**
Sample Mill, Crushing Mill, Soil Pile by Sample/ Crushing Mill, Hopto Pad, Storage Bins, and Conveyor Gallery, Acid Dust Facility.	7100	474	24
Sinter Stockpile Building, Highline Railroad, Abandoned and New Breaking Floor, Groundwater Sump.	1,370	92	5
Concentrate Storage and Handling Building Ventilation System	0	0	0
400' D&L Stack, 200' Acid Stack, 425' Blast Furnace Stack	6,890	460	23
Total	**15,360**	**1,026**	**52**

Number of haul trucks assumes a 15 cubic yard capacity. Alternative truck haul capacities may be used by the contractor (typically a range of 10 cubic yards to 20 cubic yards).
The actual number of samples may vary based on the capacity of the haul trucks used and the number of truck loads. The number of samples will be adjusted to the actual number of truckload transported to the CAMU.

Each haul truck payload to be sampled will be divided into five areas. A grab sample shall be collected at a random location within each of the five areas. If, based upon Asarco's engineering consultant's determination, a location within a sampling area can be visually identified to be potentially the worse case for that area, the sample will be obtained from that location to bias the sample. If, based on Asarco's engineering consultant's judgment, it is not possible to identify a worse case location, the sample will be obtained from a random location. All five samples will be combined into one composite sample and mixed thoroughly. This composite sample will be forward to the laboratory for analyses.

A sampling notebook shall include the location and work area where waste is being hauled from, a description of the materials in the haul truck payload, the sample identification number, and the date and time the sample is taken. A photograph of the truck payload will also be collected.

9.2 LABORATORY PROCEDURES

Laboratory analysis will be performed for total metals using analytical methods shown in Table 9-2.

TABLE 9-2. CAMU SOILS ANALYTICAL PARAMETER LIST

Parameter	Analytical Method(1)	Practical Quantitation Limit (mg/Kg)
Total Metals — Digestion by EPA Method 3050 (Method 7471 for Mercury)		
Aluminum (Al)	6010B/6020	5
Antimony (Sb)	6010B/6020	5
Arsenic (As)	6010B/6020	5
Barium (Ba)	6010B/6020	5
Beryllium (Be)	6010B/6020	5
Cadmium (Cd)	6010B/6020	1
Chromium (Cr)	6010B/6020	5
Cobalt (Co)	6010B/6020	5
Copper (Cu)	6010B/6020	5
Gold (Au)	6010B/6020	5
Iron (Fe)	6010B/6020	5
Lead (Pb)	6010B/6020	5
Manganese (Mn)	6010B/6020	5
Mercury (Hg)	7471	1
Nickel (Ni)	6010B/6020	5
Selenium (Se)	6010B/6020	5
Silver (Ag)	6010B/6020	5
Thallium (Tl)	6010B/6020	5
Vanadium (V)	6010B/6020	5
Zinc (Zn)	6010B/6020	5

NOTES: (1) Laboratory analytical methods are ICP and ICP-MS techniques from EPA SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.*

10.0 FINAL CLEANING

10.1 FINAL CLEANING ACTION

The contractor shall be responsible for conducting the final cleaning procedures outlined in this Work Plan section. The final cleaning of the Work Plan areas will involve a three-phased approach. First, all exposed concrete footprints including all material staging and processing areas will undergo a rough cleaning using conventional scraping and shoveling methods. Although this cleaning technique provides an efficient method for removing residual materials, it cannot achieve the prescribed level of cleanliness. To supplement conventional cleaning methods, the concrete footprint will be mechanically swept. The use of the mechanical sweeper will remove surface materials that may not be completely removed using conventional cleaning techniques. Finally, the concrete footprint will be cleaned using a high-velocity vacuum. This final cleaning method will remove any fine material, particularly along the interfaces between the concrete floor and building columns, fan foundations, and support walls. Final cleaning will be deemed complete when no process materials are visible, as determined by MDEQ representatives.

Once demolition is complete and the debris has been removed, a final inspection of the floor footprint of the demolished structures will be conducted. Asarco's engineering consultant shall conduct a visual survey to catalog any area within the structure footprints where concrete is not present and underlying soils may have been exposed to elevated metal bearing materials. The survey will document the condition of concrete within the structures and floors. The documentation will include a description and photographs. All exposed soil areas, broken or severely cracked concrete areas will be mapped and recorded on plan views of the demolished structures. All areas with exposed soils will be sampled in accordance with Section 11.0 of this Work Plan.

11.0 EXPOSED SOIL SAMPLING

Asarco's engineering consultant shall be responsible for the soil sample collection tasks outlined in this Work Plan section. Soil samples will be collected from designated areas where exposed soils are present within the demolition footprint. As part of site surveys conducted in 2007, exposed soil areas within or adjacent to cleaning and demolition footprint areas were identified in the field and mapped. Prior to conducting the exposed soil sampling procedures, visually obvious dust (typically indicated by dark gray or black color and fine-grained, silty texture) within demolition footprint areas will be removed by the contractor. Asarco's engineering consultants shall conduct soil sampling and the contractor will provide personnel and equipment to conduct the test pit excavation. In 2009, a total of seven samples shall be collected. The sample locations are shown in red on Sheet 10 in Appendix B. Asarco will submit the soil sampling results including laboratory QA/QC information, sample receipt checklists, and chain-of-custody to the MDEQ and EPA as part of their 2009 Work Plan summary report.

11.1.1 Exposed Soil Area Sampling Methods

The identified exposed surface soil areas that will be encountered within the cleaning and demolition footprints shall be sampled and analyzed for the following indicator parameters: arsenic, copper, cadmium, lead, zinc and selenium, and supplemental parameters: aluminum, antimony, barium, beryllium, chrome, cobalt, iron, manganese, mercury, nickel, silver, thallium and vanadium using wet chemistry standard EPA methods. The soil sample collection and analytical matrix is summarized in Table 11-1.

11.1.1.1 Initial Exposed Surface Soil Characterization

A total of five surface (0 - 4" increment) soil samples shall be collected from each sample site in identified exposed soil areas and composited into one representative sample of the area. Surface soil samples will be collected using hand tools (hand shovels, trowels, or hand augers). The samples will be stored in ziploc bags and archived for analysis. All analytical work will be conducted before the 6-month holding time limit for metals. The location of

each soil sampling site will be cataloged using sample numbers and GPS coordinates. A photograph of each sample site will be taken. The sampling Standard Operation Procedures (SOPs), analytical parameters, and methods are summarized in Table 11-1.

The surface soil samples shall be collected from exposed soil areas using the same techniques and procedures used for Interim Measures (IM) and RCRA Facility Investigation (RFI) activities, as described in the IM and RFI Work Plans (Hydrometrics, 1999b and Hydrometrics, 2000).

11.1.1.2 Exposed Soil Subsurface Profile Sample Collection

The exposed area sub-surface soil profile samples will be collected at the depth intervals shown in Table 11-1 and analyzed for the indicator parameters arsenic, cadmium, copper, lead, zinc and selenium. Samples shall be collected from test pits advanced using standard excavation equipment. The test pits will be advanced to standard excavation practical limits of 15 feet or until equipment refusal is encountered. Excavator equipment refusal is defined by the inability to advance the excavation in the event of encountering the groundwater table, or in the event hard boulder strata conditions prohibit the ability of the excavator to advance the test pit.

The test pit subsurface soil samples will be analyzed using standard EPA wet chemistry methods (EPA Methods SW 6010/6020) at a commercial laboratory. The final interval samples will also be submitted to a commercial laboratory for definitive analysis using standard EPA wet chemistry methods (EPA Methods SW 6010/6020) and Synthetic Precipitation Leachate Procedure (SPLP).

The soil sample collection and analytical matrix is summarized in Table 11-1. As the table shows, initial and final samples will be analyzed for indicator parameters (As, Cd, Cu, Pb, Se, and Zn) and for supplemental parameters (Al, Sb, Ba, Be, Cr, Co, Hg, Fe, Mn, Ni, Ag, Tl, and V). The final sample increment will also be analyzed using the Synthetic Precipitation Leachate Procedure (SPLP).

TABLE 11-1. DEMOLITION FOOTPRINT UNPAVED EXPOSED AREA SOIL SAMPLE COLLECTION AND ANALYTICAL MATRIX

Sample Location	Purpose	Sample Types and Depth Intervals[1]	Number of Sampling Events	Sampling Standard Operating Procedures	Analytical Parameters	Methods	Project Detection Limit Goal	Comment
Speiss-Dross and Thaw House Area (Area 1) (15 Sites) **Direct Smelt and Shop Area Cleaning and Demolition** (Area 6) (1 Sites) **Crushing Mill and Sample Mill Area** (Area 5) (3 sites) **Former Zinc Shop and Meeting Room Area** (Area 7) (4 sites)	Remove dust and impacted soils in exposed or unpaved areas within the structure demolition foot print.	Sample from Excavator Bucket. Sample intervals: 0-4" 4"-12" 1'-2' 2'-4' 4'-6' 6'-8' 8'-10' 10'-12' 12'-15'	1	HF-SOP-2 HF-SOP-4 HF-SOP-5 HF-SOP-7 HF-SOP-29 HF-SOP-31 HF-SOP-58 HS-SOP-6 HS-SOP-13 HS-SOP-57	Indicator Parameters (5) (All Depth Increments) As Cd Cu Pb Zn Se Supplemental Parameters (13) (Initial and Final Depth Increments Al Sb Ba Be Cr Co Hg Fe Mn Ni Ag Tl V	ICP/ICP-MS EPA SW6010/6020 ICP/ICP-MS EPA SW6010/6020 ICP/ICP-MS EPA SW6010/6020 ICP/ICP-MS EPA SW6010/6020 ICP/ICP-MS EPA SW6010/6020 ICP/ICP-MS EPA SW6010/6020 ICP/ICP-MS EPA SW6010/6020 ICP/ICP-MS EPA SW6010/6020 ICP/ICP-MS EPA SW6010/6020 ICP/ICP-MS EPA SW6010/6020 EPA SW7471 ICP/ICP-MS EPA SW6010/6020 ICP/ICP-MS EPA SW6010/6020 ICP/ICP-MS EPA SW6010/6020 ICP/ICP-MS EPA SW6010/6020 ICP/ICP-MS EPA SW6010/6020 ICP/ICP-MS EPA SW6010/6020	5 ppm 1 ppm 5 ppm 5 ppm 5 ppm 5 ppm 5 ppm 5 ppm 5 ppm 0.05 ppm 5 ppm 5 ppm 5 ppm 5 ppm 5 ppm 5 ppm	Test pit sampling continues until the practical excavation limit is reached. Practical excavation limits are defined as: - Limit of common excavation equipment - 15 feet - Excavation equipment refusal because of hard strata or large boulders, - Entering the water table where caving strata do not allow advancement of test pit sampling to a depth of 15 feet. The final sample increment is retained and analyzed by wet chemistry for Indicator Parameters, Supplemental. Parameters and SPLP.
	Document metal concentrations in test leachate from the SPLP testing procedure	Final increment sampled from excavator bucket and sampled for metals	1		As Cd Cu Pb Zn Se	SPLP (EPA 1312) SPLP (EPA 1312) SPLP (EPA 1312) SPLP (EPA 1312) SPLP (EPA 1312) SPLP (EPA 1312)	0.1 mg/l 0.1 mg/l 0.1 mg/l 0.1 mg/l 0.1 mg/l 0.1 mg/l	

(1) Sample depths are approximate; actual depths will based on field conditions.
Duplicates will be collected at a minimum frequency of 1 per 20 field samples. Duplicates for SPLP analysis will be submitted at a frequency of 1 per 20 samples selected for SPLP.
Detection limits for SPLP analysis have been set at 100x below regulatory limits.
Sample site locations will be surveyed by GPS during or after samples are collected.

Sub-surface soil samples will be collected directly from the soil excavation equipment bucket in the following increments. Sub-surface soil increments are: 4 - 12", 1 - 2', 2 - 4', 4 - 6', 6 - 8', 8 - 10', 10 - 12', and 12 - 15'. One soil sample will be collected directly from the backhoe bucket for each increment within an identified exposed soil sample area.

Sub-surface soil samples will be collected from exposed soil areas using the same techniques and procedures used for Interim Measures (IM) and RCRA Facility Investigation (RFI) activities, as described in the IM and RFI Work Plans (Hydrometrics, 1999b and Hydrometrics, 2000). Samples will be stored in ziploc bags and shipped to the laboratory for analysis.

12.0 PLUG AND ABANDON UNDERGROUND UTILITIES

The contractor shall be responsible for plugging and abandoning underground utilities outlined in this Work Plan section and is responsible for coordinating this task with Asarco's engineering consultant. Underground piping and structures exist within the footprint in which demolition will take place. The underground piping and structures will be plugged and sealed in place once demolition is complete but prior to final grading and the interim cap being installed. The utility locates shall be performed by the contractor and compared with the utility drawings and underground utility information provided by Asarco to identify as many underground utilities as possible. The underground utility maps provided by Asarco are included as Sheets 11 and 12 in Appendix B. The abandoned underground utilities that shall be flow filled are illustrated on Sheet 13 in Appendix B.

Utility piping larger than 6 inches in diameter will be flushed with water and blown out with air to ensure flow within the pipes. The sanitary sewer lines that are scheduled for plugging and abandoning will be flushed with water containing a bleach mixture and blown out with air. The contractor should anticipate that some utilities/piping may contain some residual material (e.g. plant water, residual pipe sediment, sewage) from previous activities and will need to take necessary precautions in the handling and disposal of any such materials. The water collected from the flushing of the underground utilities will first be routed to Asarco's on-site car wash thickener building for solids separation and then to Asarco's WTF. Large solids (if any) will be dried at the car wash thickener building prior to placement in the CAMU Phase 2 Cell. Any fine sediment (if any) that pass through the car wash thickener process will be managed in the sediment handling system of Asarco's WTF and transported off-site for disposal. Sediment that may be present in the ferrous-containing plant water pipe and plant water return lines will be comprised primarily of rust. Further characterization of the sediments removed from the flushing of the underground utilities will not take place but will be managed as previously described.

All existing underground utilities (e.g. piping conduits, fire plugs, or sumps) will be plugged/capped and abandoned in place along their entirety utilizing flow fill or other approved material. Flowable fill or control density fill (CDF) shall be used as a low strength, self consolidating fill material for confined spaces which can be easily excavated at a later time. CDF is characterized by a high maximum slump of 8 inches. CDF shall consist of Portland Cement, aggregates, water, and fly ash. Chemical admixtures and other mineral admixtures may be used. The actual mix proportions and flow characteristics shall be determined by the producer of the CDF to meet site conditions. In all piping systems, the flow fill will be introduced using pressure not to exceed 100 psi. The grouting will continue at the inlet of the underground utility until a steady flow of grout exits the pipe outlet. The outlet will be sealed then the inlet will be grouted under pressure using a pressure between 50 and 100 psi.

One 4-foot diameter groundwater sump exists within the demolition footprint near the abandoned breaking floor building as shown on Sheet 13 in Appendix B. This sump is 14.5 feet deep and shall be abandoned. This sump was used to dewater the Direct Smelt Building and was never used as a monitoring well. The sump shall be abandoned under the State of Montana well abandonment regulations (ARM 36.21.670). Once the sump is clean and the above ground section is demolished, it will be filled with cement grout to grade using the specifications required under ARM 36.21.675.

13.0 INTERIM CAPPING

The contractor shall be responsible for conducting the interim capping outlined in this Work Plan section. The areas where above grade demolition activities have been completed shall be sealed in a manner that will mitigate the infiltration of water. This section outlines the backfilling, grading, capping, and maintenance procedures involved with installing and maintaining interim caps.

13.1 BACKFILL LOCATIONS AND FUMED SLAG COMPOSITION

Once final cleaning activities are complete, certain areas may be graded and, as necessary, backfilled to achieve proper drainage prior to placement of an interim cap. The contractor shall use on-site fumed slag as backfill. The fumed slag may be placed in areas that are below grade or require drainage assistance. The fumed slag will serve as the subgrade for the interim cap, over which an engineered cap comprised of non-woven geotextile and RPE will be placed. The fumed slag has been used as a grading material at the plant site in the past and possesses good physical characteristics for fill or sub-foundation uses (granular material and compacts wells). Although fumed slag contains elevated total metal concentrations, the metals are bound in a silicate-iron matrix with characteristics of low metal leachability. The potential for metal migration from the fumed slag is low. In response to EPA's July 6, 2006 comments, Asarco provided the rationale for using fumed slag for backfilling purposes, including study results derived from the RCRA Consent Decree investigations. In April 2005, Department representatives collected fumed slag samples from the East Helena Plant to assess the potential environmental impacts from its use as an iron substitute within the cement manufacturing industry. A July 2006 Department Environmental Impact Statement (EIS) contains additional slag related information.

Most, but not all of the footings or similar structures encountered during the implementation of the Work Plan will be brought to grade. Most of the concrete, asphalt slabs, and some interior wall and/or footings will remain in place. The presence of above ground concrete, asphalt, walls, or footings will not compromise nor impair the ability to achieve proper

drainage. The areas adjacent to these elevated structures will be contoured with fumed slag. This practice will minimize abrupt edges, facilitate the ability to place the interim cap, and reduce the potential for future liner damage.

Regardless of these efforts, the integrity of the cap may be affected by excessive wind or other condition beyond our control. The placement of additional sandbags and tethered vehicle tires over problematic cap areas will be employed to address liner displacement issues. On-going maintenance and repair of the interim cap will be employed.

13.2 LOCATION OF INTERIM CAPS

Once the required backfilling has occurred, certain areas shall be capped to control drainage and potential infiltration from precipitation and run-on within the newly exposed footprints or any other areas impacted by the demolition project. The described capping is considered a precautionary, interim measure. The capping techniques, procedures, and materials are designed to control drainage, potential infiltration, and run-on until the final cover system is constructed. Although the capping program is interim, it is possible that many of the features such as placement of the fill material and interim caps will remain in place even after a final remedy is implemented. Sheet 14 and 15 in Appendix B illustrates the areas in which interim capping will be placed following the Work Plan implementation.

13.3 INTERIM CAP TECHNIQUES, PROCEDURES AND MATERIALS

The demolition areas where above and below grade demolition activities has occurred shall covered as illustrated on Sheet 14 and 15 in Appendix B. The interim cap shall be comprised of a 10-oz geotextile and a geomembrane cap of 24-mil RPE liner.

In general, from the top down, the interim cap will consist of the following:

- Sand bags and/or tethered tires to secure the interim cap,
- A 24-mil reinforced polyethylene (RPE) with the PRE seams overlapped 3 inches and sewn,

- A minimum 10-ounce non-woven geotextile,
- A prepared sub-grade consisting of fumed slag fill for grading purposes, and
- Existing soils, concrete slabs and/or concrete foundations.

Upon completion of the demolition operations, footprint soil sampling, and area clean-up, the contractor shall remove all debris and items from the slab that could possibly penetrate the geotextile and geomembrane. This includes, but is not limited to, protruding rebar, pipes, and sharp concrete. The contractor shall utilize the existing on-site fumed slag as fill material over the identified areas. This fumed slag will be placed and rough graded to create the positive drainage required per Sheet 14 and 15 in Appendix B. The fumed slag has been used as a grading material at the plant site in the past and possesses good physical characteristics for fill or sub-foundation uses (granular material and compacts wells). Once the slag fill is graded to allow for proper drainage, it shall be rolled with a smooth drum vibrating roller to create a smooth surface for temporary liner placement.

The geotextile and geomembrane shall be laid, seamed, and secured as detailed on Sheet 16 in Appendix B unless the contractor proposes alternative methods that are approved by Asarco. Additionally, sandbags will be placed intermittently within the center liner area to prevent the liner from being picked up by wind uplift or other forces. If the contractor chooses to use tethered tires to secure the interim caps, the number of tires should be limited. The contractor will warranty their work and may present alternative anchoring techniques acceptable to Asarco to ensure their warranty. The contractor will be responsible for all future repairs to the liner for a period of one year from the date of installation. As an added preventative measure, the contractor shall utilize sandbags made of UV Resistant 9-mil PE, which will provide superior UV resistance (compared to standard plastic woven sandbags) to prevent breakdown by sunlight. All sandbag openings shall be secured using heavy-duty zip ties.

13.4 MAINTENANCE OF INTERIM CAP

13.4.1 Site Inspection

Asarco shall conduct periodic inspections of the interim cap to ensure that the interim cap systems are performing adequately and to identify problems and provide proper maintenance of interim cap systems. The inspection program will involve three types of inspections: (1) informal inspections, (2) periodic technical inspections, and (3) special inspections after extreme events.

The informal inspection is actually a continuing effort by on-site personnel, performed in the course of their normal duties. Periodic technical inspections and inspections after extreme events will be performed by onsite Asarco staff (or other technical representatives) familiar with the design and construction of the capping systems. The periodic technical inspection will be performed monthly to document the condition of the cap components. Special inspections are very similar to periodic technical inspections but are performed only after an extreme event such as a rare rainstorm, tornado, or earthquake.

The inspection of the interim cap system will typically involve walking the entire site in a systematic fashion that ensures a comprehensive review. If any problem or deficiency is found, the inspector should record the location on a field sketch. A complete description of the affected area, including all pertinent data (i.e., size of the area and other descriptive remarks such as exposed synthetic materials) should be recorded on the appropriate reporting forms. An accurate and detailed description of observed conditions will enable a meaningful comparison of conditions observed at different times.

Photographs may be helpful in documenting problems. Provisions should be made to keep a photographic log of problems, repairs, and general site conditions. This log will provide valuable information when evaluating the performance of the interim cap system and when planning repair strategies.

It is important to have a record of site conditions at various stages after capping. Good documentation will provide valuable information to help maintenance and repair planning. Inspection checklists to assist in the inspection and documentation procedures should be developed and modified as needed throughout the interim capping period. The checklist will (at a minimum) contain items to evaluate such as membrane condition, sand bag condition, liner seams, liner/concrete attachments and site drainage. A copy of an example inspection form is attached in Appendix D.

13.4.2 Site Security

The interim cap will be contained within the fenced Asarco facility and will be kept secured so that people or animals do not disturb the interim cap. Site access by ongoing plant or demolition operations will be limited through the use of barricades, barrier tape, or temporary fencing. Plant personnel will advise contractors conducting site activities of access limits within or near capped areas.

13.4.3 Site Maintenance

As shown in Table 13-1, there are four different types of maintenance tasks listed by priority rather than by frequency. Table 13-1 is provided as a guide to prioritize the different types of maintenance activities in proper perspective. The different types of maintenance are also discussed in the following subsections.

TABLE 13-1. PRIORITY OF MAINTENANCE TASKS

Priority	Type of Maintenance	Description and Example
1	Emergency	A situation requiring immediate attention (for example, fire or flood).
2	Preventative	Scheduled inspection and minor repairs carried out during inspection (for example, cleaning of membrane liner).
3	Corrective	Corrective maintenance required as a direct result of scheduled inspection (for example, repair of torn membrane liner).
4	Housekeeping	Routine housekeeping of buildings and grounds (for example, disposal of debris and general housekeeping).

1. Emergency maintenance - Emergencies are situations arising unexpectedly that require urgent attention. Often, immediate response must be provided to avert potential serious damage. Provisions for emergency repair/damage control activities must therefore be in-place prior to the occurrence. Toward this end, an Emergency Contacts list will be prepared and kept current, and include local emergency response organizations, assigned maintenance personnel, and agency and owner representatives. Table 13-2 provides a partial list of emergency contacts.

2. Preventative maintenance - Preventative maintenance will be performed to extend the life of equipment and structures. With the exception of routine surveillance and inspections, preventative maintenance tasks should be scheduled in accordance with the recommendations of the material and equipment manufacturers. Scheduled inspection and maintenance of all site facilities will help ensure that potential problems are discovered and corrected before they become serious, as well as providing for the performance of periodically required upkeep. During routine inspections, the Asarco personnel should be alert for any abnormal conditions, which could indicate potential problems.

3. Corrective maintenance - Corrective maintenance consists of repair and other non-routine maintenance. Asarco personnel must always be ready to handle these tasks as the need arises. Corrective maintenance procedures should follow the equipment or material manufacturer's recommendations. In planning for the corrective maintenance, arrange for the assistance of an engineer or manufacturer's representative, if necessary.

4. Housekeeping - Maintaining well-kept facilities indicates pride on the part of the Asarco personnel, and provides for good and efficient operations. Well-kept property cultivates good neighbor relations with adjacent property owners. Housekeeping tasks may include collecting/disposing of litter or debris and maintaining access barriers.

TABLE 13-2. EMERGENCY NOTIFICATION CONTACTS AND PHONE NUMBERS

General Emergency Numbers	
Fire Department	911
Ambulance	911
Police	911
Facility Resources	
ASARCO LLC	
Blaine Cox (East Helena Smelter)	(406) 227-4098
Jon Nickel (East Helena Smelter)	(406) 227-4529
Other Resources	
U.S. EPA (24-hour emergency)	(206) 553-1263
Superfund/RCRA Hotline	(800) 424-9346
Hydrometrics, Inc.	(406) 443-4150

13.5 DEPARTMENTAL INSPECTIONS AND CONFIRMATION

Asarco will notify the Department within five (5) working days after removal of the material and demolition a specific process unit or areas has been completed. The purpose of this notification is to request that the Department, through its oversight authority, inspect and confirm that the cleaning activity has been performed in accordance with the Work Plan.

These notifications and inspections will allow the Department to document that Asarco has fulfilled all the conditions of the 2007 Order, of which the Work Plan is a part. The Comprehensive List of Process Units and Other Areas of Interest will be regularly updated after the Department inspects the process units or locations.

14.0 DEMOBILIZATION AND CONTRACT CLOSE-OUT

Following the completion of all field activities, the contractor shall clear the site of temporary construction facilities as well as the disconnection and removal of temporary power sources. All equipment mobilized to the jobsite throughout the project will also be removed. A site walk through will be conducted with the Asarco Project Management Team and contractor at the completion of demobilization. This site walk will be used to receive closeout of construction activities or identify "punch list items" to be addressed. Following the completion of field activities, the contractor shall submit to Asarco any documentation that had not previously been forwarded to Asarco on a weekly basis.

15.0 PROJECT OVERSIGHT

Asarco shall contract a engineering consultant to conduct the project oversight associated with the implementation of this Work Plan. Project oversight will include oversight of all activities outlined in this Work Plan to ensure the contractor meets all expectations and provisions. In addition, Asarco will hire third party independent oversight to perform quality assurance on the removal and reinstallation of the temporary cap on the CAMU Phase 2 Cell.

16.0 REPORTING

Asarco will host weekly construction meetings in which the contractor, project oversight personnel, and Asarco will be present. The MDEQ and EPA are invited to attend these meetings. Asarco will notify the MDEQ and EPA of the time and location of the weekly meeting. Weekly construction meetings will include a review of work conducted the previous week, problems encountered, and scheduling for the following week. The contractor will be responsible for providing a weekly update and the following week's schedule. In addition to weekly construction meetings, Asarco will provide the MDEQ with quarterly reports and an annual report. At their request, MDEQ and EPA shall be provided copies of reports.

16.1 QUARTERLY REPORTING

Asarco intends to begin the work outlined in this Work Plan on or before May 1, 2009. Within 30 days after each calendar quarter (no later than July 31, 2009, October 31, 2009, and, if necessary, January 31, 2010), Asarco will submit quarterly reports that contain the following information:

a. A description of the portion of the Work Plan completed;
b. Summaries of all deviations from the approved Work Plan during the reporting period;
c. Summaries of all problems or potential problems encountered during the reporting period;
d. Projected work for the next reporting period;
e. Documentation of all shipments of recyclable material and hazardous waste off-site including shipping papers such as manifests (if required); and
f. Description of each shipment of reclaimed or recycled material made during the preceding quarter indicating how the material is managed, handled, or treated for recovery or recycling that demonstrates that it has value. The information to be submitted to the MDEQ and EPA in making a successful stewardship demonstration is: (1) acceptance criteria required by the receiving facility (expressed as a minimum

g. threshold of recoverable metals and maximum allowable toxic metals), (2) a demonstration that the receiving facility is in compliance with all applicable environmental requirements, (3) a copy of the contractual agreement between Asarco, its broker and the receiving facility, (4) the name of the state or provincial regulatory contact and facility contact.

Quarterly reports will not be required after submittal of the 2009 Work Plan Completion Report.

16.2 ANNUAL REPORTING

Within thirty (30) days, but, no later than March 31, 2010, after Asarco concludes that it has fully implemented the materials removal outlined in the 2009 Cleaning and Demolition Work Plan, Asarco shall submit a 2009 Work Plan Completion Report to the MDEQ and EPA. The contents of the Work Plan Completion Report will include:

a. A description of the cleaning efforts conducted;
b. If applicable, documentation of all shipments of recyclable materials and/or hazardous wastes;
c. Summaries of all problems or potential problems encountered during the reporting period; and
d. Certification that the Work Plan has been fully implemented.

Each month, Asarco submits certified progress reports to EPA, which discuss the actions taken by Asarco in achieving compliance with the Decree. These monthly reports will discuss progress in implementing the components of this Work Plan.

2009 CLEANING AND DEMOLITION PROGRAM

AND

2009 INTERIM MEASURES WORK PLAN ADDENDUM

ASARCO EAST HELENA PLANT

APPENDIX A

March 2009

COMPREHENSIVE LIST OF PROCESS UNITS AND OTHER AREAS OF INTEREST (AOIs) (January 2009)

Asarco East Helena Plant
Comprehensive List of Process Units and Other Areas of Interest (AOI)
Updated January 2009

Location	Operational Status	Has Cleanup Been Completed	Date of Cleanup and/or Demolition	State Inspection/ Confirmation
NON-PRODUCTION AREAS				
Paint Shop	Not In Use	Not Required	Not Required	10/29/2003
Paint Storage Area	Storage	Not Required	Not Required	2/23/2004
Methanol Storage	Storage	Not Required	Not Required	10/29/2003
Motor Storage Shop	Storage	Not Required	Not Required	10/29/2003
High Lead Welding	Not In Use	Not Required	Not Required	10/29/2003
Sweeper Garage	Storage	Not Required	Not Required	10/29/2003
	Demolished in Fall 2007			
Laboratory	Storage	Yes	7/13/2004	2/23/2004
	Demolished November 2006			11/15/2006
Laboratory Storage	Storage	Not Required	Not Required	2/23/2004
	Demolished November 2006			11/15/2006
Sanitary Sewer Plant	Not In Use	Not Required	Not Required	10/29/2003
Acid Plant Shop	Storage	Not Required	Not Required	4/7/2004
	Demolished Fall 2008			
Carpenter Shop	Not In Use	Not Required	Not Required	10/29/2003
	Demolished Fall 2008			
Main Shop	Not In Use	Not Required	Not Required	10/29/2003
Pumphouse	In Use	Not Required	Not Required	
Sump by Pumphouse	In Use	No	Pending	
Auto Shop	Not In Use	Not Required	Not Required	10/29/2003
	Demolished Fall 2008			
Warehouse	Storage	Not Required	Not Required	4/7/2004
Warehouse Pad	Storage	Not Required	Not Required	4/7/2004
Warehouse Chemical Accum.	Storage	Yes	7/13/2004	4/7/2004
Powerhouse	In Use	Not Required	Not Required	4/7/2004
Blacksmith Shop	Not In Use	Not Required	Not Required	10/29/2003
Crane Shed	Not In Use	Not Required	Not Required	
Brick Shed	Not In Use	Not Required	Not Required	10/29/2003
Used Oil Storage	Not In Use	Not Required	Not Required	10/29/2003
	Demolished Fall 2008			
Hazardous Waste	Not In Use	Not Required	Not Required	10/29/2003
Accumulation at 97 Bins	Demolished Fall 2008			
97 Bins	Not In Use	Not Required	Not Required	10/29/2003
	Demolished Fall 2008			
Guzzler Vacuum System	In Use	Not Required	Not Required	4/7/2004
Contractor's Lunchroom	Demolished	Yes	Fall 2007	9/14/2007
Storage Garage	Demolished	Yes	Fall 2007	9/14/2007
Contractor's Changeroom	Demolished	Yes	Fall 2007	9/14/2007
Main Office	Demolished	Yes	Fall 2007	9/14/2007
Natural Gas Valve House	Demolished	Yes	Fall 2007	9/14/2007

Location	Operational Status	Has Cleanup Been Completed	Date of Cleanup and/or Demolition	State Inspection/ Confirmation
TANKS				
Speiss Tank	Demolished	Yes	7/22/2003 8/8/2005 Fall 2006	8/28/2003 11/15/2006
Stormwater Tank	In Use	Yes	7/21/2003 and 8/16/2004	4/7/2004
Thornock Tank	In Use	Yes	7/22/2003	8/28/2003
Million Gallon Tanks	In Use	Yes	7/23/2003 and 8/15/2004 9/1/2005 (west)	4/7/2004
Clarified Water Tanks	In Use	Yes	Summer 2002	4/7/2004
Equalization Tank	In Use	Yes	Summer 2002	4/7/2004
Truck Scale Storm Sump	In Use	Yes	7/25/2003 and 8/19/2004 8/8/2005	4/7/2004
Truck Gate Storm Sump	In Use	Yes	7/21/2003	4/7/2004
Thawhouse Storm Sump	In Use	Yes	7/21/2003 8/8/2005	4/7/2004
Baghouse Storm Sump	In Use	Yes	7/25/2003 and 8/19/2004	
G-Pan Storm Sump	Under Cap	Yes	7/22/2003 and 8/20/2004 Fall 2006	4/7/2004 11/15/2006
Footnote: The schedule for cleaning all stormwater tanks and sumps is governed by the amount of sediment accumulation over a given period of time.				

Location	Operational Status	Has Cleanup Been Completed	Date of Cleanup and/or Demolition	State Inspection/ Confirmation
ORE STORAGE AREAS				
Thawhouse Building	Demolished	Yes	Fall 2007	10/29/2003
Coverall Buildings - Barnum Building - Bailey Building	In Use Storage of Demolished Waste	 No	Vacuum/Wash-down in 2002 Prior to Lease Pending	10/29/2003 10/29/2003
	Additional cleaning following removal of waste material to CAMU			
Ringling Building	Not In Use	Yes	Summer 2002	10/29/2003
	Disassembled by URS			11/2008
Ore Storage Yard	In Use	Not Required	Not Required	4/7/2004
High Grade Building	Not In Use	Yes	Summer 2002	10/29/2003
Hopto Unloading Bins	Not In Use	Yes	Summer 2002	10/29/2003
Direct Smelt Building	In Use	Yes	Summer 2002	10/29/2003
Printed Circuit Board Process	Never Used	Not Required	Not Required	10/29/2003
Footnote: The Direct Smelt Building was used to store road sand, mobile equipment, accumulated HDS filter cake, and CAMU ACM prior to shipping for disposal.				

Location	Operational Status	Has Cleanup Been Completed	Date of Cleanup and/or Demolition	State Inspection/ Confirmation
ORE RECEIVING				
Hopto Unloading Beltline	Not In Use	No	Pending	Not Conducted
Hopto Unloading Bin Walls	Not In Use	Not Required	Not Required	Not Conducted
Former Crushing Mill	Not In Use	Yes	Summer 1998	4/7/2004
Sample Mill	Not In Use	Not Required	Not Required	4/7/2004
Sample Mill Baghouse Hopper	Not In Use	Yes	8/12/2003	8/28/2003 and 4/7/2004
New Crushing Mill Office	Not In Use	Not Required	Not Required	10/29/2003
New Crushing Mill Floor	Not In Use	No		10/29/2003
New Crushing Mill Belts	Not In Use	No		10/29/2003
	Removed/Shipped Off-Site October 2008			
New Crushing Mill Baghouse Hopper	Not In Use	Yes	8/5/2003	8/28/2003 10/29/2003
CSHB Truck Bins	Not In Use	No		10/29/2003
A-Conveyor Belt	Not In Use	No		10/29/2003
A-Conveyor Belt Gallery	Not In Use	No		10/29/2003
A-Conveyor Ventilation Pipe	Not In Use	No		10/29/2003
Door to A-Conveyor Vent. Pipe	Not In Use	No		10/29/2003
CSHB Feeders	Not In Use	No		10/29/2003
CSHB Under Feeders	Not In Use	No		10/29/2003
CSHB Feeder Tops	Not In Use	No		10/29/2003
CSHB Tracks	Storage of Waste	No		10/29/2003
CSHB Main Bins	Not In Use	No		10/29/2003
CSHB Office	Not In Use	Not Required	Not Required	10/29/2003
CSHB Crane Decks	Not In Use	No		
CSHB Bin 13	Not In Use	Yes	Summer 2002	8/28/2003
CSHB Bin 14	Not In Use	No		10/29/2003
CSHB Bin 15	Not In Use	No		10/29/2003
CSHB Bin 16	Not In Use	Yes	6/26/2003	8/28/2003
CSHB North Baghouse Hopper	Not In Use	Yes	8/6/2003	8/28/2003
CSHB South Baghouse Hopper	Not In Use	Yes	8/7/2003	8/28/2003
CSHB Feeder Baghouse Hopper	Not In Use	Yes	8/11/2003	8/28/2003
No. 6 Baghouse Hopper	Not In Use	Yes	8/11/2003	8/28/2003
CSHB Stack Base	Not In Use	Found Clean	Not Required	8/28/2003
Dustmaster Tank	Not In Use	Yes	8/14/2003	8/28/2003
CSHB I-Bin	In Use Store waste	No	Pending	4/7/04,12/22/04 6/23/05, 9/1/05
Truck Scales	In Use	No	Pending	

Footnote: The CSHB (concentrate storage and handling building) and new crushing mill underwent extensive mechanical cleaning during the summers of 2001and 2002. Unfortunately, some of these areas have not been adequately cleaned to meet work plan criteria. Therefore, these areas are assumed to require additional cleaning.

Location	Operational Status	Has Cleanup Been Completed	Date of Cleanup and/or Demolition	State Inspection/ Confirmation
SINTER PLANT				
Hammer Mill	Demolished	Yes	September 2006	10/29/03,11/15/06
B-Conveyor Belt	Demolished	Yes	September 2006	10/29/03,11/15/06
B-Conveyor Belt Gallery	Demolished	Yes	September 2006	10/29/03,11/15/06
Nodulizer	Demolished	Yes	September 2006	10/29/03,11/15/06
C-Belt Conveyor	Demolished	Yes	September 2006	10/29/03,11/15/06
Ignition Hopper	Demolished	Yes	September 2006	10/29/03,11/15/06
Feed Hopper	Demolished	Yes	September 2006	10/29/03,11/15/06
1st Deck Ventilation Pipe	Demolished	Yes	September 2006	10/29/03,11/15/06
Sinter Machine	Demolished	Yes	September 2006	10/29/03,11/15/06
Sinter Machine Access	Demolished	Yes	September 2006	10/29/03,11/15/06
Pallet Room	Demolished	Yes	September 2006	10/29/03,11/15/06
2nd Deck Cleanout Chutes (2)	Demolished	Yes	September 2006	10/29/03,11/15/06
2nd Deck Windboxes (11)	Demolished	Yes	September 2006	10/29/03,11/15/06
2nd Deck Ventilation Pipe	Demolished	Yes	September 2006	10/29/03,11/15/06
Fan Deck Oil Room	Demolished	Yes	September 2006	10/29/03,11/15/06
1A Pan	Demolished	Yes	September 2006	10/29/03,11/15/06
1 Pan	Demolished	Yes	September 2006	10/29/03,11/15/06
2 Pan	Demolished	Yes	September 2006	10/29/03,11/15/06
3 Pan	Demolished	Yes	September 2006	10/29/03,11/15/06
4 Pan	Demolished	Yes	September 2006	10/29/03,11/15/06
F-Belt Conveyor	Demolished	Yes	September 2006	10/29/03,11/15/06
F-Belt Conveyor Gallery	Demolished	Yes	September 2006	10/29/03,11/15/06
Elevator	Demolished	Yes	September 2006	10/29/03,11/15/06
G-Pan	Demolished	Yes	September 2006	10/29/03,11/15/06
E-Belt	Demolished	Yes	September 2006	10/29/03,11/15/06
Smooth Rolls	Demolished	Yes	September 2006	10/29/03,11/15/06
Spike Rolls	Demolished	Yes	September 2006	10/29/03,11/15/06
Returns Tank	Demolished	Yes	September 2006	10/29/03,11/15/06
Vibrating Conveyor	Demolished	Yes	September 2006	10/29/03,11/15/06
Sinter Storage Bin	Demolished	Yes	September 2006	4/7/2005 10/29/03,11/15/06
Coke Storage Bin	Demolished	Yes	September 2006	4/7/2005 10/29/03,11/15/06
Sinter Basement	Demolished	Yes	September 2006	10/29/03,11/15/06
Larry Pit	Demolished	Yes	September 2006	10/29/03,11/15/06
Numbers 1,2,3,4,and 5 Fan Housing	Demolished	Yes	September 2006	10/29/03,11/15/06

Location	Operational Status	Has Cleanup Been Completed	Date of Cleanup and/or Demolition	State Inspection/ Confirmation
SINTER PLANT (continued)				
Weak Gas Ventilation Flue System	Demolished	Yes	September 2006	10/29/03,11/15/06
Strong Gas Ventilation Flue System	Demolished	Yes	Summer 2006	10/29/03,11/15/06
Baghouse Fan	Demolished	Yes	Summer 2006	10/29/03,11/15/06
Hot Cottrell Fan	Demolished	Yes	Summer 2006	10/29/03,11/15/06
Ignition Furnace Fan	Demolished	Yes	Summer 2006	10/29/03,11/15/06
Downdraft Fan	Demolished	Yes	Summer 2006	10/29/03,11/15/06
Cyclones	Demolished	Yes	Summer 2006	10/29/03,11/15/06
Crushing Circuit Ventilation System	Demolished	Yes	Summer 2006	11/15/06
No. 7 Baghouse Hopper	Not In Use	Yes	3/3/2003	8/28/2003
No. 8 Baghouse Hopper	Not In Use	Yes	3/3/2003	8/28/2003
Sinter Plant Baghouse Hoppers	Demolished	Yes	3/3/2003	8/28/03, 11/15/06
Sinter Storage Building Ledges, Roof, and Ventilation	Not In Use	Yes	9/15/2004	8/28/2003
Sinter Storage Building Floor	Not In Use	Yes	8/21/2003	8/28/2003
Stack Interior/Base	Not In Use	Yes	November 2007	

Location	Operational Status	Has Cleanup Been Completed	Date of Cleanup and/or Demolition	State Inspection/ Confirmation
ACID PLANT				
Hot Cottrell Hoppers	Demolished	Yes	Fall 2006	8/28/03, 11/15/06
Hot Cottrell Building	Demolished	Yes	Fall 2006	4/7/04, 11/15/06
Hot Cottrell Inlet Header	Demolished	Yes	Fall 2006	4/7/04, 11/15/06
Hot Cottrell Outlet Header	Demolished	Yes	Fall 2006	4/7/04, 11/15/06
Scrubber Tower Ductwork	Demolished	Yes	Fall 2006	4/7/04, 11/15/06
Scrubber Towers	Demolished	Yes	3/5/03, Fall 2006	8/28/03, 11/15/06
Mist Precipitator Ductwork	Demolished	Yes	Fall 2006	4/7/04, 11/15/06
Mist Precipitator Base	Demolished	Yes	2/25/03, Fall 2006	8/28/03, 11/15/06
Mist Precipitator Floor Sump	Demolished	Yes	Fall 2006	4/7/04, 11/15/06
Pump Tanks	Demolished	Yes	Fall 2008	8/28/03, 11/15/06
Heat Exchangers	Demolished	Yes	Fall 2008	4/7/04
Tail Gas Ductwork	Demolished	Yes	Fall 2008	4/7/04
Tail Gas Stack Interior/Base	Not In Use	Yes	November 2007	4/7/2004
Acid Dust Bin/Building	Demolished	Yes	3/5/03, Fall '06	8/28/03, 11/15/06
93% Acid Storage Tanks	Demolished	Yes	Fall 2008	4/7/2004
93% Dry/Intermediate/Final Tower Tanks (3 Tanks)	Demolished	Yes	Fall 2008	4/7/2004 6/23/2005
98% Acid Storage Tank	Demolished	Yes	Oct./Nov. 2005	4/7/04, 11/15/06 6/23/2005 9/1/2005
Decolorization Acid Tanks	Demolished	Yes	Fall 2008	6/23/2005
Hydrogen Peroxide Tanks	Empty	Not Required	Not Required	4/7/2004
Converter Catalyst	Demolished	Yes	Fall 2008	4/7/2004
Acid Cooling Tower Base	Demolished	Yes	Fall 2008	4/7/2004
Acid Dust Recovery Building	Demolished	Yes	Fall 2006	4/7/04, 11/15/06
80 Ton Dust Recovery Tank	Demolished	Yes	Fall 2006	4/7/04, 11/15/06
Hot Cottrell Access Piping	Demolished	Yes	Fall 2006	4/7/04, 11/15/06
Large Acid Storage Tanks	Empty	Yes	Fall 2005	
Footnote: The strong acid contained in acid plant storage vessels was removed during the fourth quarter 2005.				

Location	Operational Status	Has Cleanup Been Completed	Date of Cleanup and/or Demolition	State Inspection/ Confirmation
BLAST FURNACE				
Matte Breaking Building (Old)	Not In Use	Yes	8/23/2005	10/29/03, 4/7/05 6/23/05, 9/1/05
Matte Breaking Building (New)	Not In Use	Found Clean	Not Required	10/29/03, 4/7/05
Sump by Breaking Floor	Not In Use	No	Pending	
Highline 47 Feeder Belts	Not In Use	Yes	10/11/2004	10/29/03, 4/7/05 6/23/2005
	Demolished	Yes	Summer 2007	9/14/2007
Highline 47 Open Bins	Not In Use	Yes	9/11/03,10/15/04	10/29/03, 4/7/05
	Demolished	Yes	Summer 2007	9/14/2007
Highline Storage Bins	Not In Use	Yes	Summer 2001	10/29/03, 4/7/05
	Demolished	Yes	Summer 2007	9/14/2007
Portland Cement Silo	Not In Use	Yes	9/3/2003	10/29/03,4/7/05
Blast Furnace Dust Silo	Not In Use	Yes	Summer 2001	4/7/2005
Blast Charge Floor	Not In Use	Yes	8/15/2004	10/29/03, 4/7/05
	Demolished	Yes	Summer 2007	9/14/2007
Scrap Conveyor	Demolished	Yes	9/20/2004	4/7/05, 6/23/05
Outside Blast Flue	Not In Use	Yes	10/20/2004	4/7/2005
	Demolished	Yes	Fall 2008	
Blast Feed Floor	Not In Use	Yes	11/10/2004	4/7/2005
	Demolished	Yes		9/14/2007
Blast Ventilation/Process Gas System	Not In Use	Yes	11/10/2004	4/7/2005
	Demolished	Yes	Summer 2007	9/14/2007
Blast Agglomerator Building	Demolished	Yes	8/26/2003	10/29/2003
Blast Agglomerator Feed Tank	Demolished	Yes	Summer 2001	10/29/2003
No. 1 Blast Tapping Floor	Not In Use	Yes	12/05/2004	10/29/03, 4/7/05 6/23/2005
	Demolished	Yes	Fall 2007	9/14/2007
No. 3 Blast Tapping Floor	Not In Use	Yes	12/05/2004	10/29/03, 4/7/05 6/23/2005
	Demolished	Yes	Fall 2007	9/14/2007
No.1 and 3 Crucible	Not In Use	Not Required	Not Required	4/7/2005 6/23/2005
	Demolished	Yes	Fall 2007	9/14/2007
Motor Switch Tracks	Not In Use	Yes	12/10/2004	4/7/2005 6/23/2005
No.1/3 Blast Furnace Flue	Not In Use	Yes	12/2005	6/23/05, 12/22/05,1/9/06
	Demolished	Yes	Fall 2007	9/14/2007
Blast Furnace Flue	Not In Use	Yes	Summer 2002	
	Demolished	Yes	Fall 2008	
Blast Furnace Flue Crossover	Not In Use	No		
	Demolished	Yes	Fall 2008	
Monier Flue at Baghouse Inlet	Not In Use	Yes	Third Qrt. 2005	6/23/2005,
	Demolished	Yes	Fall 2008	9/1/2005,9/16/05

Location	Operational Status	Has Cleanup Been Completed	Date of Cleanup and/or Demolition	State Inspection/ Confirmation
BLAST FURNACE (continued)				
Blast Baghouse Cellars	Not In Use	Yes	Summer 2001	
	Demolished	Yes	Fall 2008	
Blast Baghouse Thimble Floor	Not In Use	No		
	Demolished	Yes	Fall 2008	
Blast Furnace Dust Cleanout Baghouse Hopper	Not In Use	No		
	Demolished	Yes	Fall 2008	
Blast Furnace Dust Cleanout	Not In Use	No		
	Demolished	Yes	Fall 2008	
Railroad Loadout Baghouse	Never Used	Not Required	Not Required	
Blast Stack Base	Not In Use	Yes	November 2007	

Location	Operational Status	Has Cleanup Been Completed	Date of Cleanup and/or Demolition	State Inspection/ Confirmation
DROSS PLANT				
Speiss Long Pit	Demolished	Yes	Sum '02, Fall '06	6/23/05, 11/15/06
Speiss Short Pit	Demolished	Yes	Sum '02. Fall '06	6/23/05, 11/15/06
Under Reverb Furnace	Demolished	Yes	Fall 2006	6/23/05, 11/15/06
No. 4 Kettle Setting	Demolished	Yes	Fall 2006	6/23/05, 11/15/06
Under Kettle Floor	Demolished	Yes	Fall 2006	2/23/04, 11/15/06
Kettles	Demolished	Yes	Fall 2006	2/23/04, 11/15/06
Kettle Settings	Demolished	Yes	Fall 2006	2/23/04, 11/15/06
Ventilation System	Demolished	Yes	Fall 2006	2/23/04, 11/15/06
Lead Granulator	Demolished	Yes	Fall 2006	2/23/04, 11/15/06
Lead Granulator Belt	Demolished	Yes	Fall 2006	2/23/04, 11/15/06
Dross Furnace Upper Deck	Demolished	Yes	Fall 2006	11/15/2006
On Kettle Floor	Demolished	Yes	Fall 2006	11/15/2006
Dross Bullion Floor	Demolished	Yes	Fall 2006	2/23/04, 11/15/06
Speiss Pit Doors	Demolished	Yes	9/15/03, Fall '06	2/23/04, 11/15/06
Lead Pots	Demolished	Yes	Fall 2006	2/23/04, 11/15/06
Dross Reverb Furnace	Demolished	Yes	Fall 2006	2/23/04, 11/15/06
Dross Plant Crane Deck	Demolished	Yes	Fall 2006	2/23/04, 11/15/06
Dross Plant Floor	Demolished	Yes	Fall 2006	2/23/04, 11/15/06
Speiss Cleanout Bin	Demolished	Yes	Sum '02, Fall '06	2/23/04, 11/15/06
Router Dust Tank	Demolished	Yes	9/16/03, Fall '06	2/23/04, 11/15/06
Dross Plant Baghouse Hoppers	Demolished	Yes	2/24/2003 Fall 2007	2/23/04 9/14/2007
Dross Plant Stack	Demolished	Yes	9/15/2003 Fall 2007	2/23/04 9/14/2007

Location	Operational Status	Has Cleanup Been Completed	Date of Cleanup and/or Demolition	State Inspection/ Confirmation
FORMER ZINC PLANT				
Tetrahedrite Drying and Baghouse	Demolished	Not Required	Not Required	4/7/2004 and 9/24/2004
Former Zinc Furnace	Demolished	Not Required	Not Required	4/7/2004
Former Zinc Furnace Retaining Wall	Cleaned & Demolished	Yes	11/23/2004	8/8/03, 4/7/04 9/24/04, 1/27/05
Zinc Plant Holding Furnace	Cleaned & Demolished	Yes	8/8/2005	6/23/2005 9/1/2005
Zinc Plant Balloon Flue	Cleaned & Demolished	Yes	10/24/2004	8/8/03, 4/7/04 9/24/04, 1/27/05
Zinc Plant Cooling Tubes	Cleaned & Demolished	Yes	10/30/2004	8/8/03, 4/7/04 9/24/04, 1/27/05
Zinc Plant Main Railcar Loadout	Cleaned & Demolished	Yes	11/12/2004	8/8/03, 4/7/04 9/24/04, 1/27/05
Zinc Plant Baghouse	Cleaned & Demolished	Yes	12/10/2004	8/8/03, 4/7/04 9/24/04,10/28/04 1/27/05
Zinc Plant Baghouse Bags	Cleaned & Demolished	Yes	7/13/2004	8/8/03, 4/7/04 9/24/04,10/28/04
Zinc Plant Loadout Building	Cleaned & Demolished	Yes	12/1/2004	8/8/03, 4/7/04 9/24/04, 1/27/05
Zinc Plant Stack	Demolished	Yes	1/24/2005	1/27/2005

Location	Operational Status	Has Cleanup Been Completed	Date of Cleanup and/or Demolition	State Inspection/ Confirmation
WATER TREATMENT				
Soda Ash Silo	Not In Use	No	Pending	
Scrubber Blowdown Recirculation Tanks	Not In Use	Yes	12/14/2004	1/27/2005
Scrubber Blowdown Clarifier	Not In Use	Yes	12/17/2004	1/27/2005
Soda Ash Tank and Feed System	Not In Use	Yes	12/10/2004	1/27/2005
Sludge Storage Tank	Not In Use	Yes	12/13/2004	1/27/2005
Sulfur Dioxide Stripper	Not In Use	Yes	12/16/2004	1/27/2005
Neutralization Building Tank	Not In Use	Yes	12/20/2004	1/27/2005
Neutralization Building Plate Clarifier	Not In Use	Yes	12/20/2004	2/23/2004 1/27/2005
Filter Press Water Holding Tank	Not In Use	Yes	12/22/2004	1/27/2005
Neutralization Building Surge Tank	Not In Use	Yes	12/22/2004	2/24/2004 1/27/2005
Filter Press Discharge Tank	Not In Use	Yes	12/8/2004	1/27/2005
HDS Water Treatment	In Use	Not Required	Not Required	2/23/2004
Sludge Recovery Operations	In Use	Not Required	Not Required	2/23/2004
Carwash Equipment Washdown	In Use	Not Required	Not Required	2/23/2004
HERO Facility	Never Used	Not Required	Not Required	2/23/2004
Spray Dry Building	Never Used Demolished	Not Required Yes	Not Required Fall 2008	2/23/2004

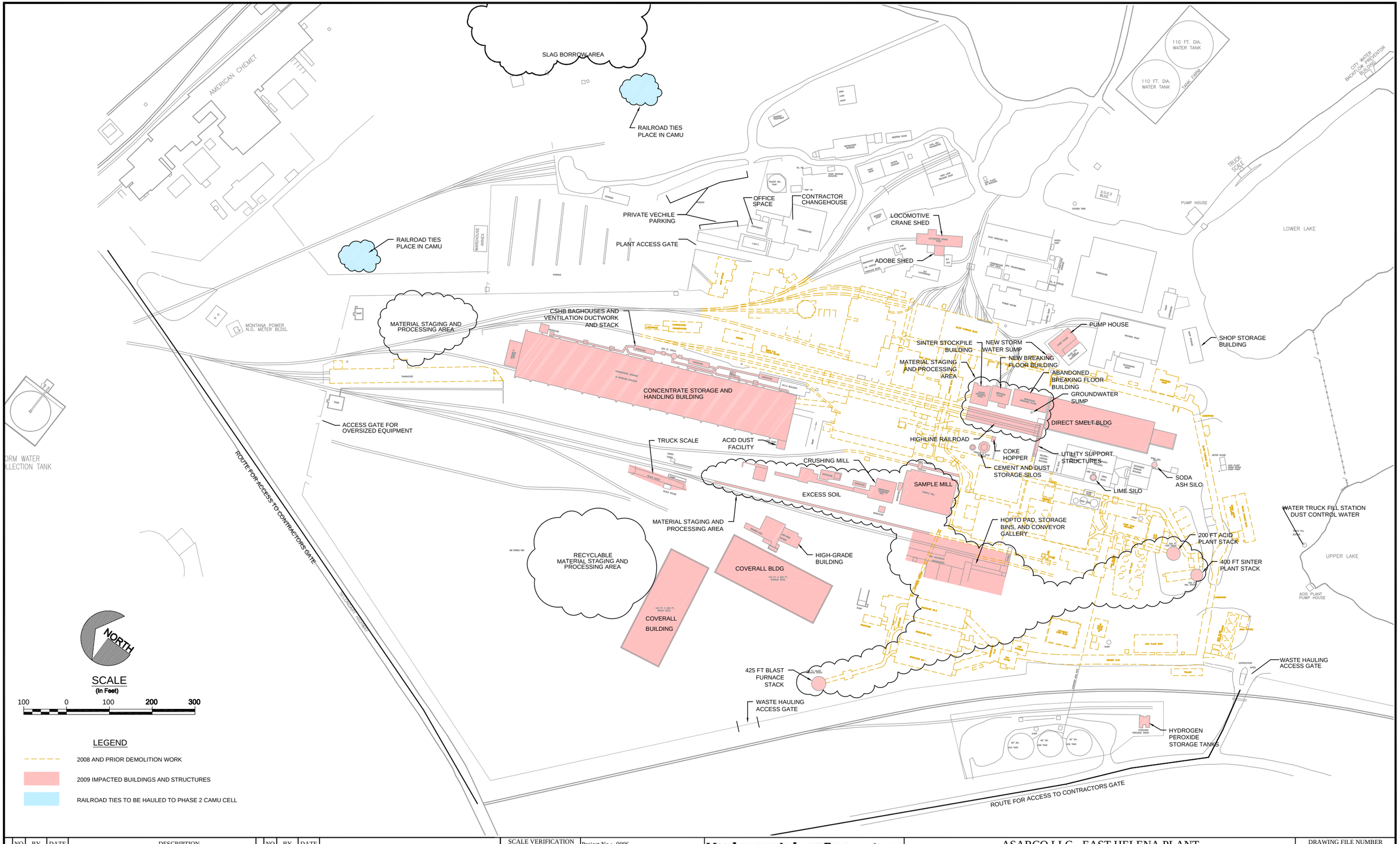
2009 CLEANING AND DEMOLITION PROGRAM
AND
2009 INTERIM MEASURES WORK PLAN ADDENDUM

ASARCO EAST HELENA PLANT

APPENDIX B

March 2009

PROJECT DRAWINGS



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REVISIONS

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Consulting Scientists and Engineers
Helena, Montana 59601
3020 Bozeman Avenue
(406) 443-4150

ASARCO LLC - EAST HELENA PLANT
2009 WORK PLAN

SITE PLOT PLAN

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900601H001	
AUTOCAD 2004 DRAWING (DWG)	
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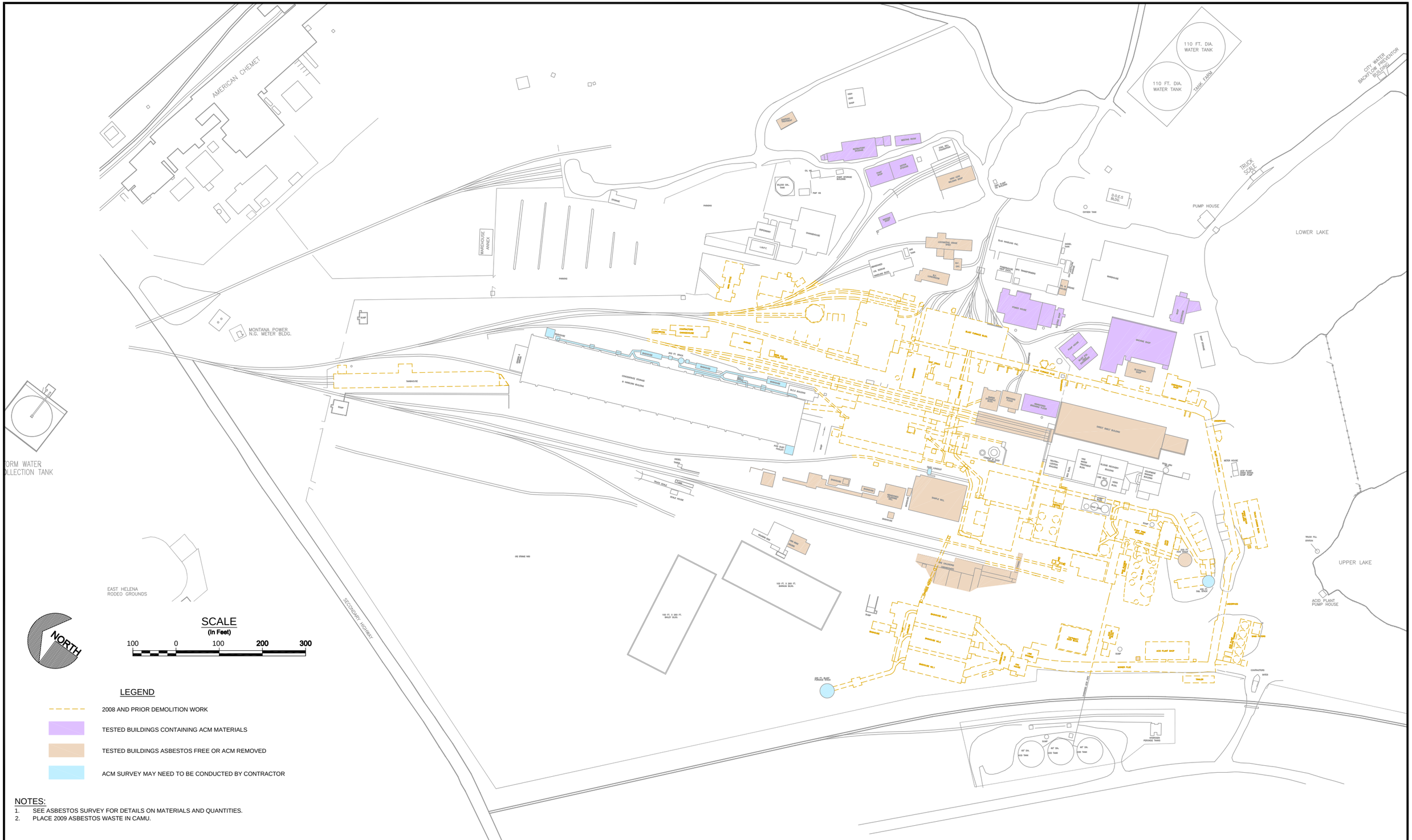

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LEGEND

- 2008 AND PRIOR DEMOLITION WORK
- TESTED BUILDINGS CONTAINING ACM MATERIALS
- TESTED BUILDINGS ASBESTOS FREE OR ACM REMOVED
- ACM SURVEY MAY NEED TO BE CONDUCTED BY CONTRACTOR

NOTES:

1. SEE ASBESTOS SURVEY FOR DETAILS ON MATERIALS AND QUANTITIES.
2. PLACE 2009 ASBESTOS WASTE IN CAMU.

NO	BY	DATE	DESCRIPTION

REVISIONS

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ASARCO LLC - EAST HELENA PLANT
2009 WORK PLAN
ASBESTOS SURVEY LOCATION MAP

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AUTOCAD 2004 DRAWING (DWG)

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LOCOMOTIVE CRANE SHED, CLEAN ENTIRE STRUCTURE AND SURROUNDING LIME ROCK

ADOBE SHED, CLEAN ENTIRE STRUCTURE

PUMP HOUSE, CLEAN ENTIRE STRUCTURE

STORMWATER SUMP, CLEAN ENTIRE STRUCTURE

CONCENTRATE STORAGE AND HANDLING BUILDING, CLEAN ENTIRE STRUCTURE

DIRECT SMELT BUILDING, CLEAN ENTIRE STRUCTURE

CEMENT AND DUST SILOS, REMOVE BAGS FROM BAGHOUSE AND CLEAN ENTIRE STRUCTURE

COKE HOPPER

CLEAN UTILITY SUPPORT TOWERS

SODA ASH SILO, REMOVE BAGS FROM BAGHOUSE AND CLEAN ENTIRE STRUCTURE

LIME SILO, REMOVE BAGS FROM BAGHOUSE AND CLEAN ENTIRE STRUCTURE

TRUCK SCALE, CLEAN ENTIRE AREA AND UNDER TRUCK SCALE

HIGH-GRADE BUILDING, CLEAN ENTIRE STRUCTURE AND SURROUNDING AREA

PLACE CLEAN CEMENT BARRIERS HERE

COVERALL BUILDINGS, CLEAN AND REMOVE CEMENT BARRIERS AND CLEAN ENTIRE STRUCTURE

HYDROGEN PEROXIDE TANKS, CLEAN TANKS

NOTES:

1. TRANSPORT LUBRICATING OILS AND TRANSFORMER OILS (NON PCB) LOCATED THROUGHOUT THE CLEANING AND DEMOLITION AREA TO THE SHOP STORAGE BUILDING AND PLACE IN THE USED OIL TANK. THEY ARE NOT APPROVED FOR PLACEMENT IN THE CAMU.
2. FOLLOW PROPER PROTOCOL (MSDS PROCEDURES) WHEN HANDLING AND TRANSPORTING ANY HAZARDOUS MATERIAL.
3. REMOVE ALL DUST AND LEAD RESIDUE FROM BUILDINGS PRIOR TO DEMOLITION OF THESE STRUCTURES IN ORDER TO MINIMIZE DUST. THIS TASK WILL REQUIRE VACUUMING.

LEGEND

2008 AND PRIOR DEMOLITION WORK

CLEANING OF BUILDINGS AND STRUCTURES NOT SCHEDULED FOR DEMOLITION

NORTH

SCALE (In Feet)

75 0 75 150 225

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ASARCO LLC - EAST HELENA PLANT
2009 WORK PLAN
BUILDINGS AND STRUCTURES FOR CLEANING ONLY

DRAWING FILE NUMBER
900601H002
AUTOCAD 2004 DRAWING (DWG)
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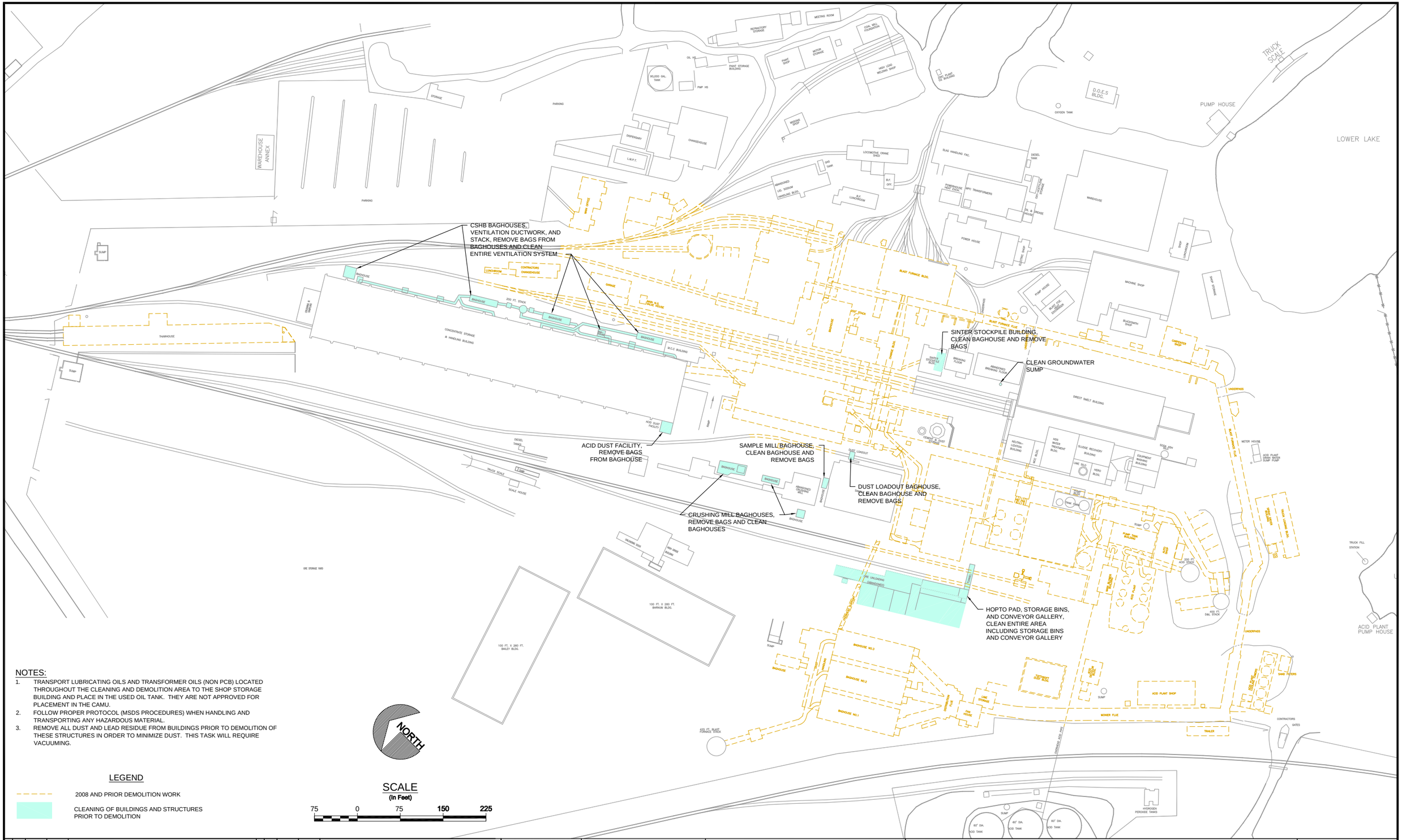

NOTES:

1. TRANSPORT LUBRICATING OILS AND TRANSFORMER OILS (NON PCB) LOCATED THROUGHOUT THE CLEANING AND DEMOLITION AREA TO THE SHOP STORAGE BUILDING AND PLACE IN THE USED OIL TANK. THEY ARE NOT APPROVED FOR PLACEMENT IN THE CAMU.
2. FOLLOW PROPER PROTOCOL (MSDS PROCEDURES) WHEN HANDLING AND TRANSPORTING ANY HAZARDOUS MATERIAL.
3. REMOVE ALL DUST AND LEAD RESIDUE FROM BUILDINGS PRIOR TO DEMOLITION OF THESE STRUCTURES IN ORDER TO MINIMIZE DUST. THIS TASK WILL REQUIRE VACUUMING.

LEGEND

2008 AND PRIOR DEMOLITION WORK

CLEANING OF BUILDINGS AND STRUCTURES PRIOR TO DEMOLITION

SCALE (In Feet)

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ASARCO LLC - EAST HELENA PLANT
2009 WORK PLAN
BUILDINGS AND STRUCTURES FOR CLEANING PRIOR TO DEMOLITION

DRAWING FILE NUMBER
900601H002
AUTOCAD 2004 DRAWING (DWG)

SHEET NUMBER	REV
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UPDATE TIME: 4:15 PM
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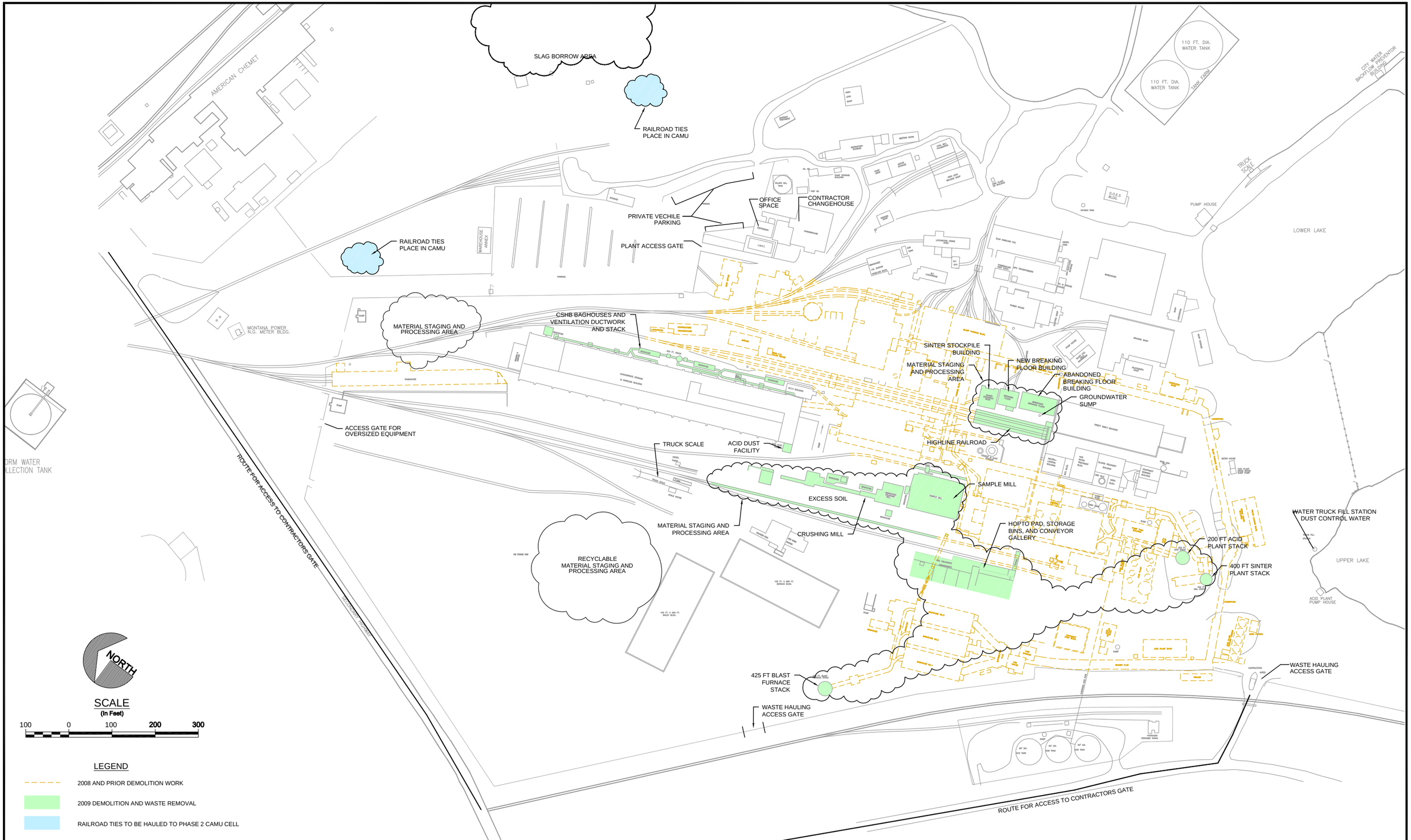

NO	BY	DATE	DESCRIPTION

REVISIONS

NO	BY	DATE	

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Project No.: 9006		
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Consulting Scientists and Engineers
Helena, Montana 59601
3020 Bozeman Avenue
(406) 443-4150

ASARCO LLC - EAST HELENA PLANT
2009 WORK PLAN
BUILDINGS AND STRUCTURES FOR DEMOLITION

DRAWING FILE NUMBER
900601H007
AUTOCAD 2004 DRAWING (DWG)

SHEET NUMBER	REV
6	△

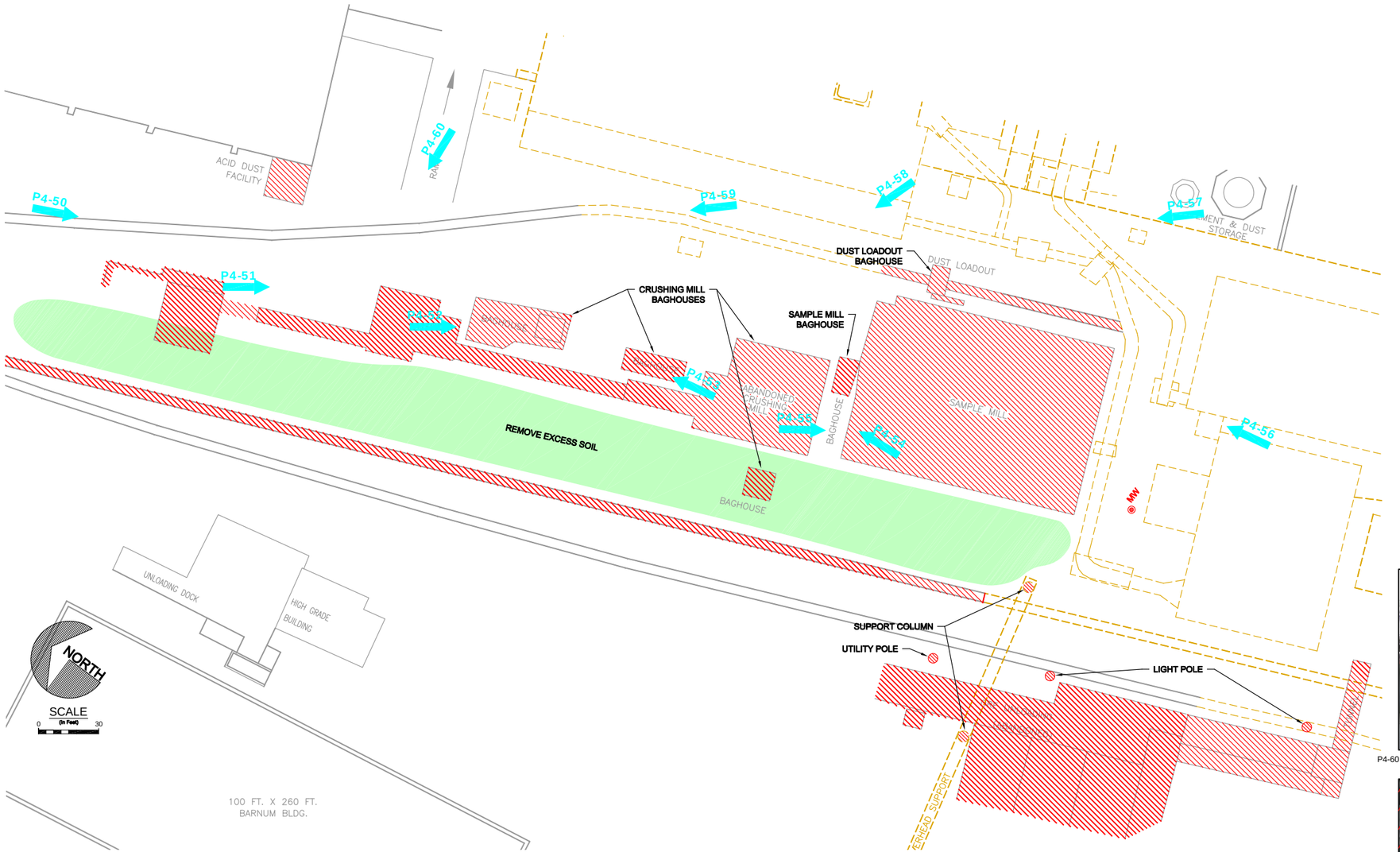
UPDATE TIME: 2:54 PM
LTABORSKY\HEL\200903111\S:\LAND PROJECTS\900601\DWG\900601H007.DWG

P4-50 NORTH SIDE OF CRUSHING MILL

P4-51 CRUSHING MILL & SUPPORT STRUCTURES

P4-52 WEST SIDE OF CRUSHING MILL

P4-53 WEST SIDE OF CRUSHING MILL



LEGEND

- 2008 AND PRIOR DEMOLITION WORK
- EXISTING STRUCTURES
- 2009 DEMOLITION WORK
- REMOVE EXCESS SOIL
- 4-63 PHOTO NUMBER AND VIEWING ANGLE
- MW MONITORING WELL - DO NOT DEMO

NOTES:

1. 2009 DEMOLITION STRUCTURES ARE MARKED WITH RED X'S AND STRUCTURES MARKED WITH BLACK X'S ARE TO BE LEFT UNDISTURBED.
2. IT MAY BE NECESSARY TO REMOVE PARTS OF TEMPORARY CAPS PRIOR TO DEMOLITION. ANY DAMAGED OR REMOVED TEMPORARY CAPS MUST BE REPLACED.
3. DEMOLISH STRUCTURES TO EXTERIOR GRADE UNLESS CONSTRUCTED OF BRICK.
4. DEMOLISH BRICK STRUCTURES TO 3 FEET BELOW GRADE.

P4-54 BAGHOUSE AND SOUTH SIDE OF CRUSHING MILL

P4-55 SAMPLE MILL

P4-56 SOUTH SIDE OF SAMPLE MILL

P4-57 EAST SIDE OF SAMPLE MILL & DUST LOAD OUT

P4-58 EAST SIDE OF CRUSHING MILL & BAGHOUSE

P4-60 CRUSHING MILL & STORAGE BUILDING

P4-59 EAST SIDE OF CRUSHING MILL & BAGHOUSES

NO	BY	DATE	DESCRIPTION

REVISIONS

NO	BY	DATE

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ASARCO LLC - EAST HELENA PLANT
2009 WORK PLAN

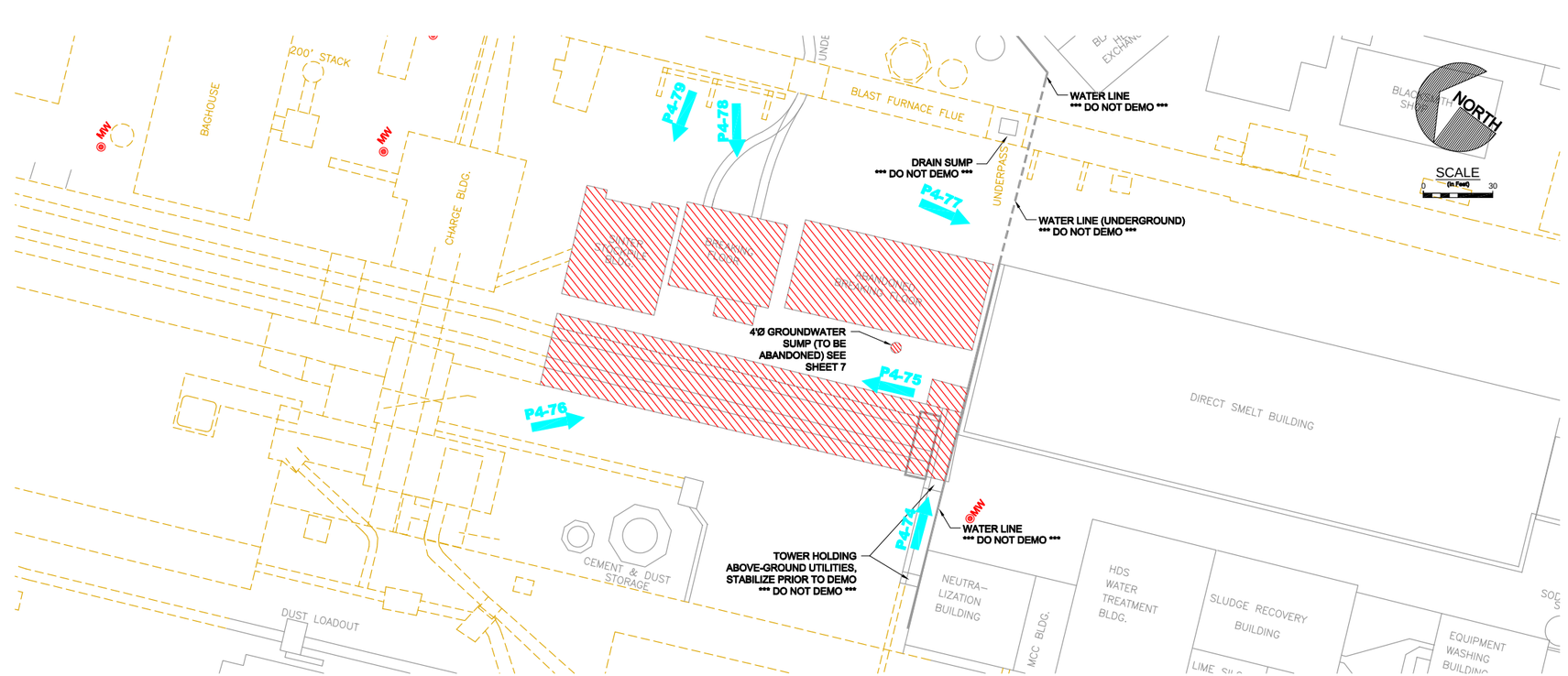
ACID DUST FACILITY, CRUSHING AND SAMPLE MILL AREA, AND HOPTO PAD, STORAGE BINS, AND CONVEYOR GALLERY

DRAWING FILE NUMBER	
900601H008	
AUTOCAD 2004 DRAWING (DWG)	
SHEET NUMBER	REV
7	△

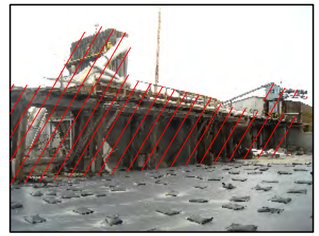
P4-77 ABANDONED BREAKING FLOOR & DIRECT SMELT

P4-78 BREAKING FLOOR

P4-79 SINTER STOCKPILE BUILDING



P4-75 LOOKING NORTH ALONG HIGHLINE



P4-76 HIGHLINE

P4-74

P4-80 425 FT BLAST FURNACE STACK

P4-81 200 FT ACID STACK AND 400 FT SINTER STACK

NORTH

SCALE
(In Feet)
50 0 50 100 150

LEGEND

- 2008 AND PRIOR DEMOLITION WORK
- EXISTING STRUCTURES
- 2009 DEMOLITION WORK
- P4-79 — PHOTO NUMBER AND VIEWING ANGLE
- MW — MONITORING WELL - DO NOT DEMO

NOTES:

1. 2009 DEMOLITION STRUCTURES ARE MARKED WITH RED X'S AND STRUCTURES MARKED WITH BLACK X'S ARE TO BE LEFT UNDISTURBED.
2. DEMOLISH STRUCTURES TO EXTERIOR GRADE UNLESS CONSTRUCTED OF BRICK.
3. DEMOLISH BRICK STRUCTURES TO 3 FEET BELOW GRADE.

NO	BY	DATE	DESCRIPTION

REVISIONS

NO	BY	DATE	

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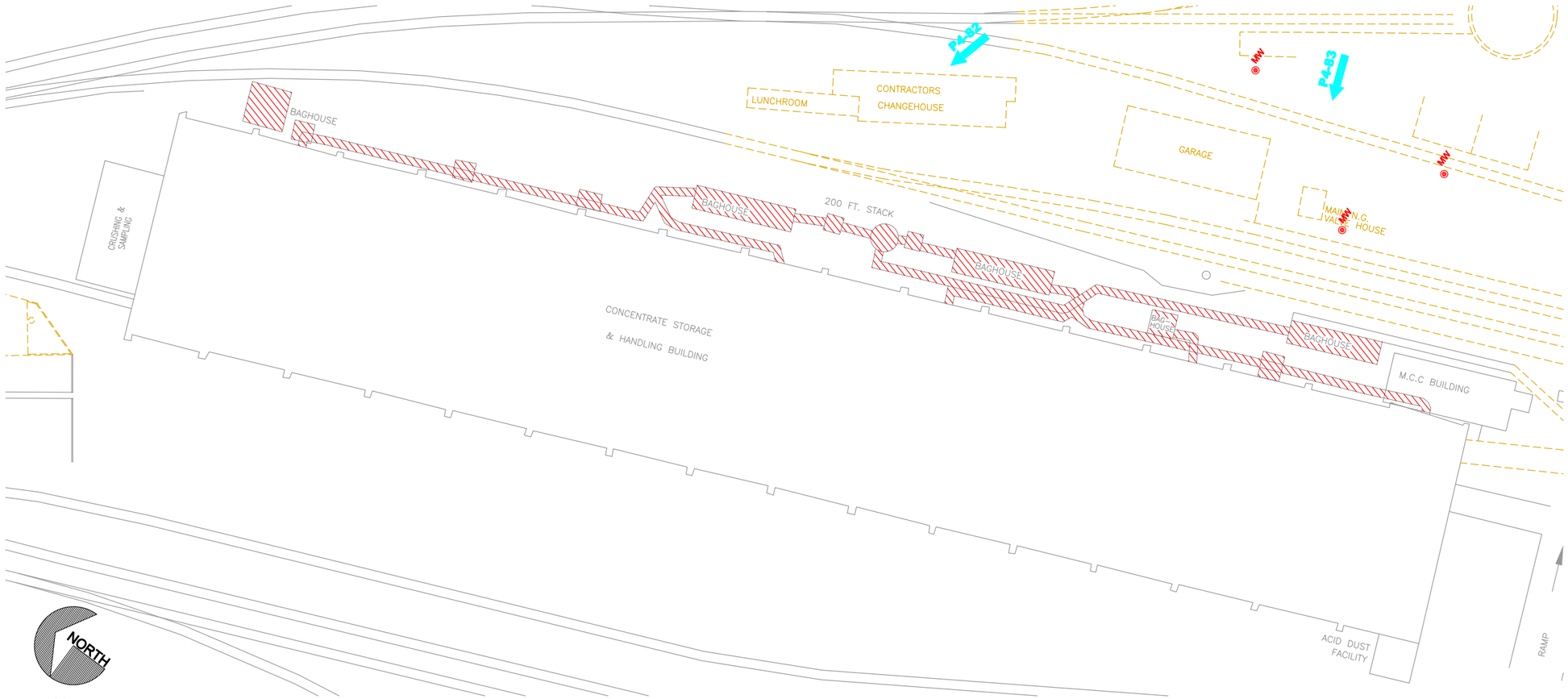
ASARCO LLC - EAST HELENA PLANT
2009 WORK PLAN
HIGHLINE RAILROAD, SINTER STOCKPILE, BREAKING FLOOR BUILDINGS, SINTER PLANT STACK, BLAST FURNACE STACK, AND ACID PLANT STACK

DRAWING FILE NUMBER
900601H009
AUTOCAD 2004 DRAWING (DWG)
SHEET NUMBER 8
REV △



LEGEND

- 2008 AND PRIOR DEMOLITION WORK
- EXISTING STRUCTURES
- 2009 DEMOLITION WORK
- P4-82 — PHOTO NUMBER AND VIEWING ANGLE
- MW — MONITORING WELL - DO NOT DEMO

NOTES:

1. 2009 DEMOLITION STRUCTURES ARE MARKED WITH RED X'S AND STRUCTURES MARKED WITH BLACK X'S ARE TO BE LEFT UNDISTURBED.
2. DEMOLISH STRUCTURES TO EXTERIOR GRADE UNLESS CONSTRUCTED OF BRICK.
3. DEMOLISH BRICK STRUCTURES TO 3 FEET BELOW GRADE.

P4-82

P4-83

NO	BY	DATE	DESCRIPTION	REVISIONS	NO	BY	DATE	

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ASARCO LLC - EAST HELENA PLANT
2009 WORK PLAN
CSHB BAGHOUSES AND VENTILATION DUCTWORK

DRAWING FILE NUMBER: 900601H015
AUTOCAD 2004 DRAWING (DWG)
SHEET NUMBER: 9
REV: △

NO	BY	DATE	DESCRIPTION

REVISIONS

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ASARCO LLC - EAST HELENA PLANT
2009 WORK PLAN
CLEANING & DEMOLITION FOOTPRINT EXPOSED SOIL SAMPLE AREAS

DRAWING FILE NUMBER
900601H013
AUTOCAD 2004 DRAWING (DWG)

SHEET NUMBER	REV
10	△

UPDATE TIME: 12:52 PM
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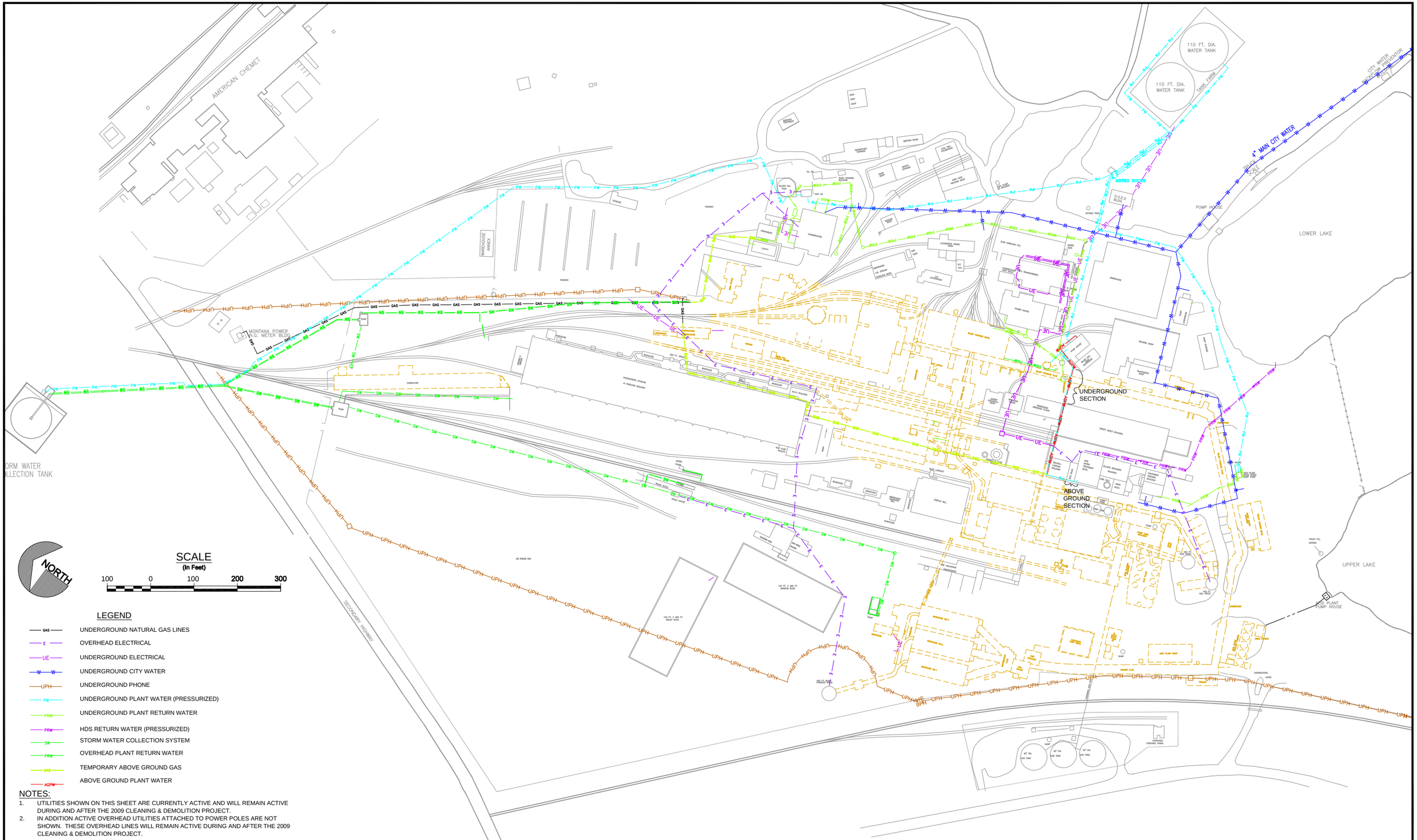

LEGEND

- GAS — UNDERGROUND NATURAL GAS LINES
- E — OVERHEAD ELECTRICAL
- UE — UNDERGROUND ELECTRICAL
- W — W — UNDERGROUND CITY WATER
- UPH — UNDERGROUND PHONE
- PW — UNDERGROUND PLANT WATER (PRESSURIZED)
- PRW — UNDERGROUND PLANT RETURN WATER
- PRW — HDS RETURN WATER (PRESSURIZED)
- SW — STORM WATER COLLECTION SYSTEM
- PRW — OVERHEAD PLANT RETURN WATER
- GAS — TEMPORARY ABOVE GROUND GAS
- AGPW — ABOVE GROUND PLANT WATER

NOTES:

1. UTILITIES SHOWN ON THIS SHEET ARE CURRENTLY ACTIVE AND WILL REMAIN ACTIVE DURING AND AFTER THE 2009 CLEANING & DEMOLITION PROJECT.
2. IN ADDITION ACTIVE OVERHEAD UTILITIES ATTACHED TO POWER POLES ARE NOT SHOWN. THESE OVERHEAD LINES WILL REMAIN ACTIVE DURING AND AFTER THE 2009 CLEANING & DEMOLITION PROJECT.

NO	BY	DATE	DESCRIPTION

REVISIONS

NO	BY	DATE

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ASARCO LLC - EAST HELENA PLANT
2009 WORK PLAN
ACTIVE UTILITIES

DRAWING FILE NUMBER
900601H004
AUTOCAD 2004 DRAWING (DWG)
SHEET NUMBER 11
REV

UPDATE TIME: 1:59 PM
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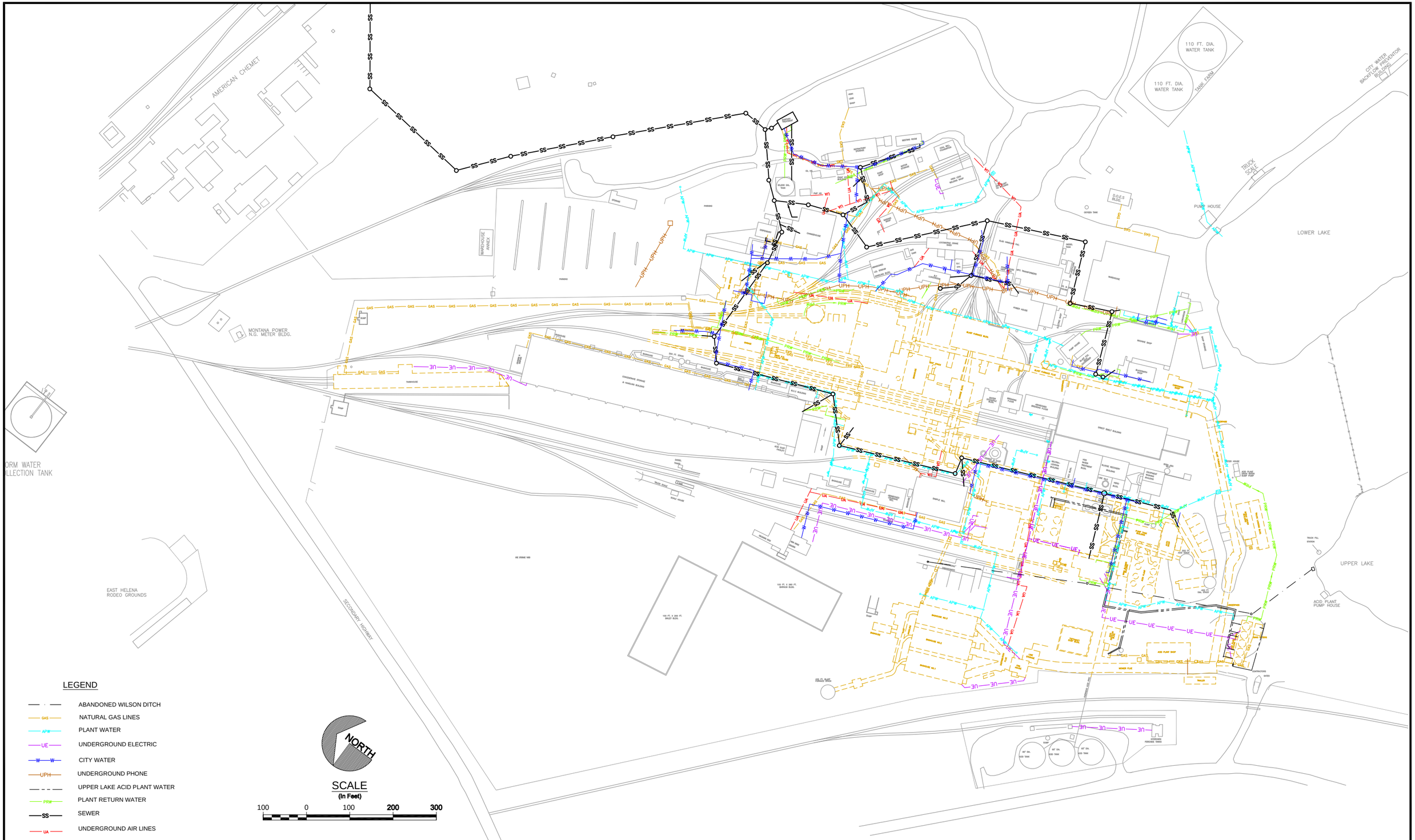

NO	BY	DATE	DESCRIPTION	REVISIONS	NO	BY	DATE	

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ASARCO LLC - EAST HELENA PLANT
2009 WORK PLAN
UNDERGROUND UTILITIES ABANDONED

DRAWING FILE NUMBER: 900601H005
AUTOCAD 2004 DRAWING (DWG)
SHEET NUMBER: 12
REV: △

UPDATE TIME: 12:30 PM
LTABORSKY\HEL\20090312\I:\LAND PROJECTS\900601\DWG\900601H005.DWG

PHOTO 1

4'Ø BY 14 1/2' DEEP GROUNDWATER SUMP - DEMOLISH TO GRADE & FILL WITH FLOWABLE FILL

4"Ø GROUNDWATER SUMP, 14½" DEEP TO BE ABANDONED (SEE PHOTO 1)

SCALE
(In Feet)
50 0 50 100 150

LEGEND
- PHOTO VIEWPOINT AND NUMBER
- APW — PLANT WATER (6")
- SS — SEWER (6-10")

NOTES:
1. USE FLOWABLE FILL OR PRESSURE GROUT TO PERMANENTLY ABANDON ALL UTILITIES SHOWN ON THIS SHEET.
2. ONLY FILL THE SECTIONS OF UTILITY LINES SHOWN. THIS MAY INVOLVE SEALING OFF CONNECTING UTILITY LINES.

NO	BY	DATE	DESCRIPTION	REVISIONS	NO	BY	DATE

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ASARCO LLC - EAST HELENA PLANT
2009 WORK PLAN
UNDERGROUND UTILITIES TO BE FLOW FILLED

DRAWING FILE NUMBER
900601H006
AUTOCAD 2004 DRAWING (DWG)
SHEET NUMBER 13
REV

UPDATE TIME: 4:11 PM
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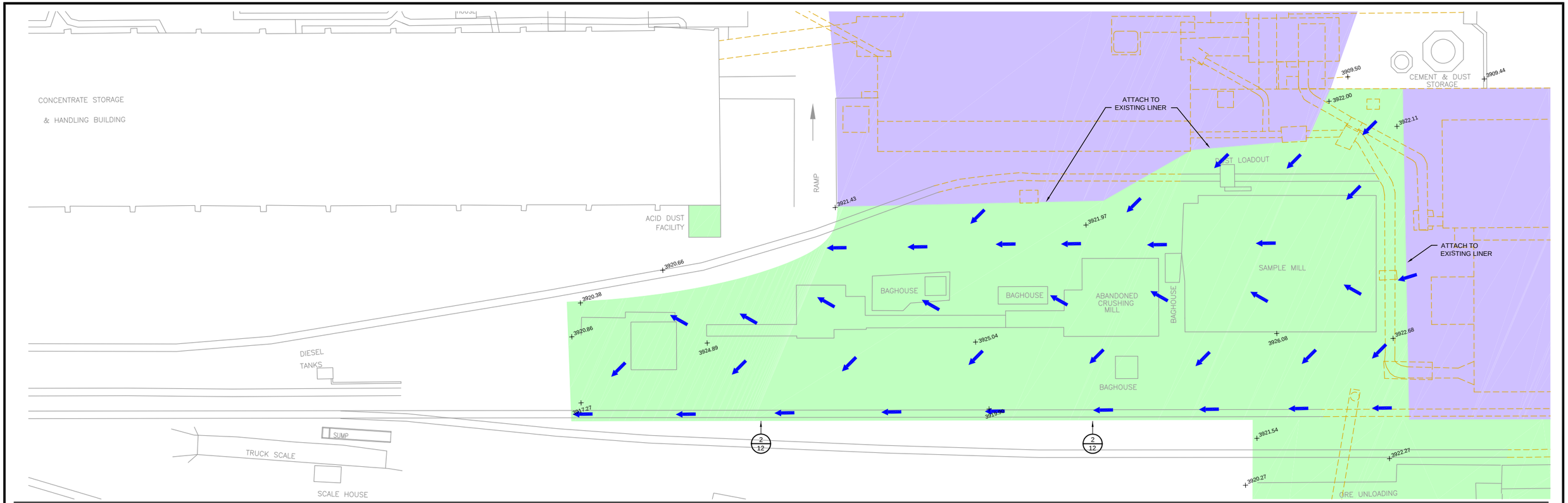

NOTES:

1. PREPARE SUBGRADE BY REMOVING ANY EXPOSED METAL OR SHARP OBJECTS.
2. USE FUMED FINE SLAG OR OTHER MATERIAL SUITABLE AS ON-SITE BORROW TO BRING LOW AREAS AND DEPRESSIONS UP TO A GRADE THAT ENSURES DRAINAGE OF THE CAP TO THE SITE STORMWATER DRAIN SYSTEM.
3. OVERLAP NON-WOVEN GEOTEXTILE A MINIMUM OF 12 INCHES.
4. Z-FOLD AND STITCH REINFORCED POLYETHYLENE (RPE) GEOMEMBRANE AT ALL SEAMS.
5. IN AREAS WHERE LINERS WILL BUTT AGAINST CONCRETE FOUNDATIONS ATTACH WITH 2"X4" TREATED TIMBERS WRAPPED WITH AT LEAST ONE FULL WRAP IN THE LINER AND ANCHORED TO THE CONCRETE WITH CONCRETE ANCHOR BOLTS AS ADDITIONAL SUPPORT USE A SIKA-FLEX CAULK TO SEAL BETWEEN THE LINER AND THE CONCRETE.
6. CONTRACTOR IS RESPONSIBLE FOR THEIR OWN QUANTITY ESTIMATES.
7. COMPLETE MONITORING WELL EXTENSIONS IN ACCORDANCE WITH MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION (MDNRC) MONITORING WELL REGULATIONS AND BY A LICENSED MONITORING WELL CONSTRUCTOR. SEE DETAIL 10/14.
8. COMPLETE LINER JUNCTIONS AT MONITORING WELLS, POWER POLES, AND WATER LINES ACCORDING TO DETAIL 9/14.
9. GRADE TRANSITIONS BETWEEN EXISTING TEMPORARY CAPS AND 2008 TEMPORARY CAP LINERS SO THAT WATER IS ABLE TO FLOW OFF CAP WITHOUT PONDING. OVERLAP TRANSITIONS AS DESCRIBED IN NOTES 3 AND 4.
10. ENSURE CAP GRADE EXCEEDS 1.5%. CAPS EXCEEDING GRADES OF 30% REQUIRE CONTINUOUS LINES OF SANDBAGS ON 5' SPACING.

LEGEND

- 2008 AND PRIOR DEMOLITION WORK
- EXISTING STRUCTURES
- SURFACE WATER DRAINAGE FLOW IN CAPPED AREAS
- 2009 TEMPORARY CAP
- 2008 AND PRIOR TEMPORARY CAP
- SURFACE WATER DRAINAGE INLET AREAS

NORTH

SCALE
(In Feet)
30 0 30 60 90

NO	BY	DATE	DESCRIPTION

REVISIONS

NO	BY	DATE

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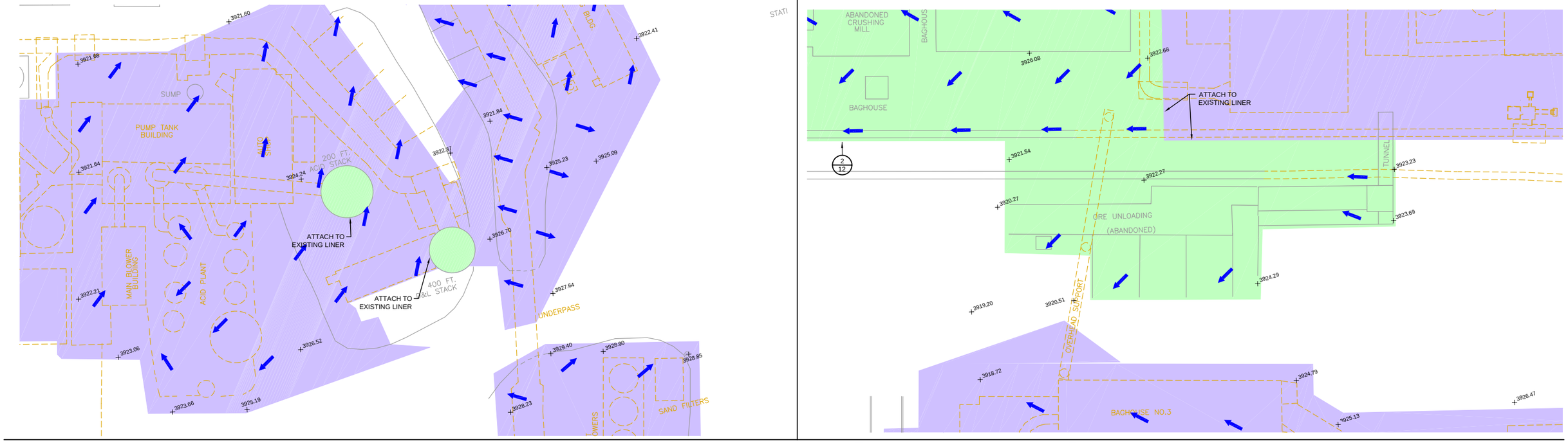
ASARCO LLC - EAST HELENA PLANT
2009 WORK PLAN
2009 COVER SYSTEM AND INTERIM CAP PLAN

DRAWING FILE NUMBER
900601H010
AUTOCAD 2004 DRAWING (DWG)
SHEET NUMBER 14
REV △



NOTES:

1. PREPARE SUBGRADE BY REMOVING ANY EXPOSED METAL OR SHARP OBJECTS.
2. USE FUMED FINE SLAG OR OTHER MATERIAL SUITABLE AS ON-SITE BORROW TO BRING LOW AREAS AND DEPRESSIONS UP TO A GRADE THAT ENSURES DRAINAGE OF THE CAP TO THE SITE STORMWATER DRAIN SYSTEM.
3. OVERLAP NON-WOVEN GEOTEXTILE A MINIMUM OF 12 INCHES.
4. Z-FOLD AND STITCH REINFORCED POLYETHYLENE (RPE) GEOMEMBRANE AT ALL SEAMS.
5. IN AREAS WHERE LINERS WILL BUTT AGAINST CONCRETE FOUNDATIONS ATTACH WITH 2"X4" TREATED TIMBERS WRAPPED WITH AT LEAST ONE FULL WRAP IN THE LINER AND ANCHORED TO THE CONCRETE WITH CONCRETE ANCHOR BOLTS AS ADDITIONAL SUPPORT USE A SIKA-FLEX CAULK TO SEAL BETWEEN THE LINER AND THE CONCRETE.
6. CONTRACTOR IS RESPONSIBLE FOR THEIR OWN QUANTITY ESTIMATES.
7. COMPLETE MONITORING WELL EXTENSIONS IN ACCORDANCE WITH MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION (MDNRC) MONITORING WELL REGULATIONS AND BY A LICENSED MONITORING WELL CONSTRUCTOR. SEE DETAIL 10/14.
8. COMPLETE LINER JUNCTIONS AT MONITORING WELLS, POWER POLES, AND WATER LINES ACCORDING TO DETAIL 9/14.
9. GRADE TRANSITIONS BETWEEN EXISTING TEMPORARY CAPS AND 2008 TEMPORARY CAP LINERS SO THAT WATER IS ABLE TO FLOW OFF CAP WITHOUT PONDING. OVERLAP TRANSITIONS AS DESCRIBED IN NOTES 3 AND 4.
10. ENSURE CAP GRADE EXCEEDS 1.5%. CAPS EXCEEDING GRADES OF 30% REQUIRE CONTINUOUS LINES OF SANDBAGS ON 5' SPACING.

LEGEND

- 2008 AND PRIOR DEMOLITION WORK
- EXISTING STRUCTURES
- SURFACE WATER DRAINAGE FLOW IN CAPPED AREAS
- 2009 TEMPORARY CAP
- 2008 AND PRIOR TEMPORARY CAP
- SURFACE WATER DRAINAGE INLET AREAS

NORTH

SCALE (In Feet)

30 0 30 60 90

NO	BY	DATE	DESCRIPTION

REVISIONS

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ASARCO LLC - EAST HELENA PLANT
2009 WORK PLAN

2009 COVER SYSTEM AND INTERIM CAP PLAN

DRAWING FILE NUMBER
900601H014
AUTOCAD 2004 DRAWING (DWG)

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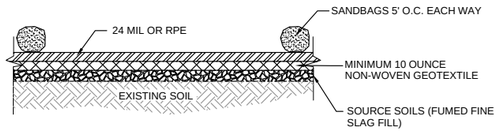
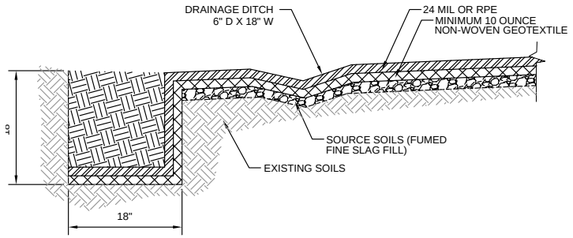
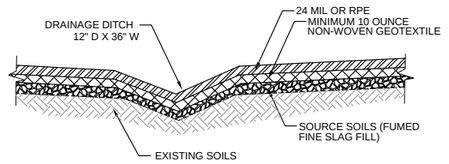


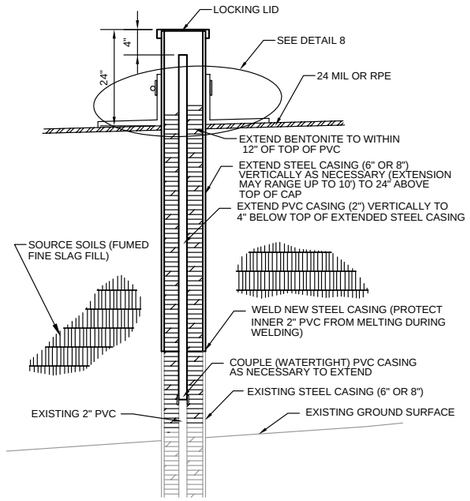
1 DETAIL
16 TEMP CAP
SCALE: NTS



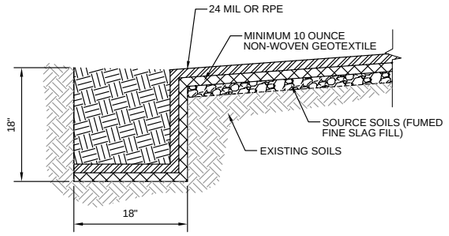
2 DETAIL
16 LINER ANCHOR TRENCH WITH DRAINAGE DITCH
SCALE: NTS



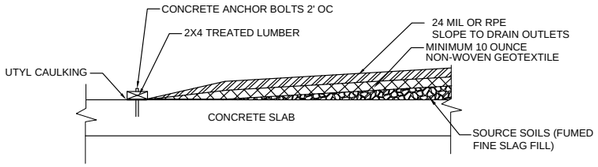
3 DETAIL
16 LINER DRAINAGE DITCH (TYP)
SCALE: NTS



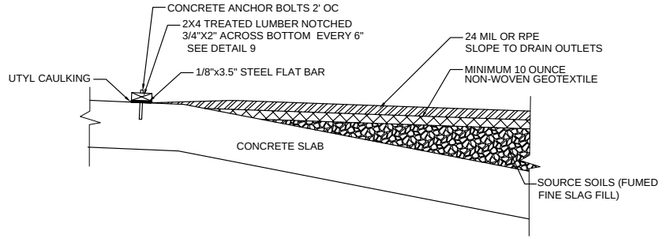
10 DETAIL
16 MONITORING WELL EXTENSION
SCALE: NTS



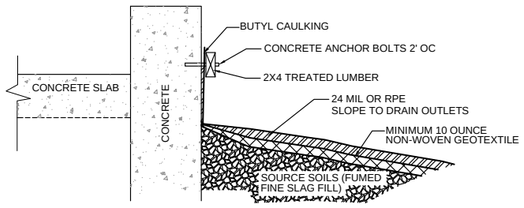
4 DETAIL
16 LINER ANCHOR TRENCH
SCALE: NTS



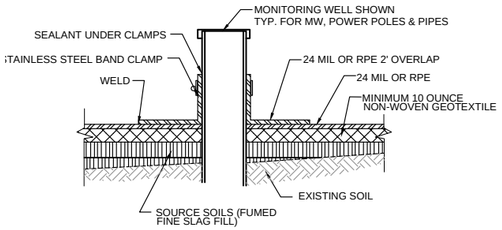
5 DETAIL
16 LINER CONCRETE ANCHOR
SCALE: NTS



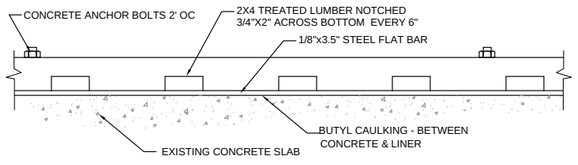
6 DETAIL
16 RUN-ON LINER/CONCRETE ANCHOR
SCALE: NTS



7 DETAIL
16 LINER WALL/FOUNDATION ANCHOR
SCALE: NTS



8 DETAIL
16 PROTRUSION & LINER CONNECTION (TYP)
SCALE: NTS



9 DETAIL
16 RUN-ON ANCHOR DETAIL
SCALE: NTS

NOTES:

1. THESE SUGGESTED DETAILS SHOW THE MINIMUM REQUIREMENTS AND ASARCO MAY ACCEPT ALTERNATIVE ANCHORING TECHNIQUES.
2. PERIMETER SANDBAGS SHALL BE TOUCHING SIDE BY SIDE.

NO	BY	DATE	DESCRIPTION

REVISIONS

NO	BY	DATE

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SCALE: AS NOTED			

Hydrometrics, Inc.
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ASARCO LLC - EAST HELENA PLANT
2009 WORK PLAN

DETAILS

DRAWING FILE NUMBER	
900601H011	
AUTOCAD 2004 DRAWING (DWG)	
SHEET NUMBER	REV
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2009 CLEANING AND DEMOLITION PROGRAM
AND
2009 INTERIM MEASURES WORK PLAN ADDENDUM

ASARCO EAST HELENA PLANT

APPENDIX C

March 2009

EXAMPLE INSPECTION FORM

INTERIM CAP INSPECTION CHECKLIST

AREA INSPECTED	Area No.		Inspected by:	DATE:		
	ITEM NO.	CONDITION	OBSERVATION	ACTION NEEDED		
				MONITOR	INVESTIGATE	REPAIR
INTERIM LINER SYSTEMS	1	Exposed liner				
	2	Sand Bags				
	3	Liner Seams				
	4	Liner/Concrete Attachments				
	5	Site Drainage				
Additional Comments:						

ASARCO LLC - EAST HELENA PLANT

2009 WORK PLAN

MARCH, 2009

LEGEND

- 2009 WORK PLAN
- 2008 AND PRIOR WORK
- DETAIL NUMBER (X / Y)
- PAGE ON WHICH DETAIL IS SHOWN

ABBREVIATIONS

B.F.	BLAST FURNACE
BLDG.	BUILDING
CONC	CONCRETE
CONV.	CONVEYOR
CY	CUBIC YARDS
Ø	DIAMETER
EL., ELEV.	ELEVATION
EX., EXIST.	EXISTING
FCE.	FURNACE
I.E.	INVERT ELEVATION
LF	LINEAL FOOT
LIQ.	LIQUID
M.C.C.	MOTOR CONTROL CENTER
MISC.	MISCELLANEOUS
MPC	NORTHWEST ENERGY
MW	MONITORING WELL
N.G.	NATURAL GAS
OC	ON CENTER
PB	LEAD BEARING MATERIAL
R, RAD.	RADIUS
SCH, SCHED.	SCHEDULE
SY	SQUARE YARDS
TYP.	TYPICAL
V	VERTICAL
W, WTR.	WATER
W/	WITH

DRAWING LIST

REVISIONS	NO	BY	DATE	DESCRIPTION

SCALE VERIFICATION BAR IS ONE INCH ON ORIGINAL DRAWING
0 1
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

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ASARCO LLC - EAST HELENA PLANT
2009 WORK PLAN

DRAWING INDEX AND SITE VICINITY MAP

DRAWING FILE NUMBER: 900601H012
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